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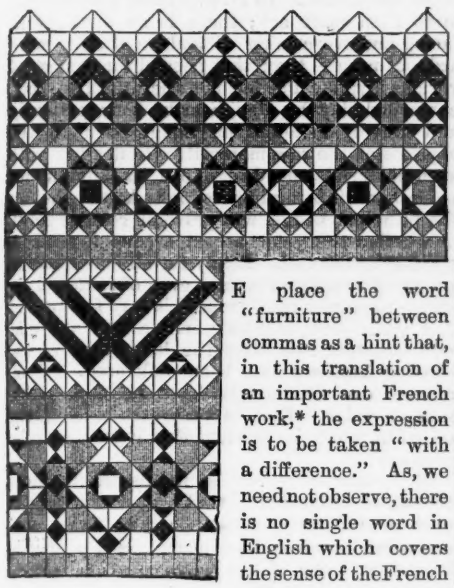
Jacquemart's History of "Furniture."



PLACE the word "furniture" between commas as a hint that, in this translation of an important French work,* the expression is to be taken "with a difference." As, we need not observe, there is no single word in English which covers the sense of the French *mobilier*; and though "furniture" is the best word for the title-page of the translation, the book has a much wider scope than would be indicated by the title "history of furniture" in its ordinary English application; including every kind of movable ornament or article belonging to the garniture of a house, and even extending to personal ornaments, such as ear-rings and brooches. And this gives quite a different position to the book, from a reviewer's standpoint, from that which it would occupy as a history of furniture proper. It would be possible to give such a history, with considerable fulness and completeness, in the scope of a large and thick quarto volume of 450 pages. But it is manifest that to give anything in this space that could really be called a "history" of such a multifarious collection of subjects as are included in the index of this book,—furniture, hangings, bronzes, ivories, terra-cotta, arms, goldsmiths' work, jewelry, enamels, glass, pottery, and a great deal more,—would be utterly impossible. The proper title should be rather "Handbook" than "History." The book gives a general idea of the times and places in which each of the branches of work touched upon has arisen, and a certain degree of description and illustration of each; but that is all. A necessary consequence is that the book deals largely in generalities; its value, in fact, consists in combining in one volume a general comparative view of the subjects it treats of, and affording the means, as the writer says in the first chapter, of "glancing rapidly at the periods whence the connoisseur may seek, with some chance of success, the various parts of a choice set of furniture." This is very useful, no doubt, but it is not exactly history.

To English readers a word or two as to the author of the book may not be out of place. The name of Jacquemart has become more or less familiar among art-connoisseurs in this country from the brilliant and masterly etchings of M. Jules Jacquemart, who has devoted a great deal of his genius with the etching-needle to the illustration of articles of ornamental design in metal, glass, and ceramic art, with such success as to give quite an interest of its own to this application of etching, and leave us in doubt whether to admire most in his productions of this kind their fidelity and value as illustrations of beautiful objects, or their interest as specimens of what etching can accomplish in giving brilliancy and variety of surface and texture. It is not, however, the artist who is the author of the book before us, but his father, M. Albert Jacquemart, long known in Paris as one of the most painstaking students, and one of the most intelligent and eager collectors of objects of ornamental art; and this hereditary interest in subjects of this class serves to explain how it came to pass that an etcher so accomplished as the younger Jacquemart came to devote so much of his power to what, in comparison with figure and landscape study, might be disparaged as merely imitative or illustrative drawing, though he made it something more than this. M. Albert Jacquemart has been a frequent contributor on his favourite subjects to the pages of the *Gazette des Beaux-Arts*, and has brought out nearly forty separate works or essays in connexion with industrial and ornamental art, of which the most important have been,—"L'Histoire artistique, industrielle, et commerciale de la Porcelaine," and "Merveilles de la Céramique," followed more recently by "Histoire de la Céramique." These were all illustrated by his son; the "History of Porcelain" by etchings, that of "Céramique" by engravings. In the book before us we have what may perhaps be called a kind of "bird's-eye view" of the whole class of subjects over which M. Jacquemart has ranged during a lifetime of investigation, and the illustrations in this case also are furnished by the pencil of M. Jules Jacquemart. Some of these illustrations we have been able to reproduce for our readers.

The first chapter, which almost alone deals with what we call furniture, takes no regular chronological sequence and no formal distribution as to countries; certain types of furniture are named and classified, and their characteristics illustrated, and then it remains to remark generally in what time and place this type originated, and what country has most practised it. This, again, is not history in any very connected form, though the chronological and typographical history can be picked out of it more or less; but it is not a bad method of calling attention to and contrasting various principles and types in furniture-making, and the illustrations are typical in the same kind of way. As the book is by a modern Frenchman, there is of course a large, we might think a disproportionate, place given to Renaissance types of furniture; but these types are so well known and have been so fully illustrated that it is hardly necessary to refer to them specially or in any critical manner. There is a tolerably detailed account of the Boule method of workmanship and design, once so popular in France and England, now so scornfully scouted by *dilettanti* in this country at least; there are typical illustrations of the ebony cabinet incrusted, or carved and inlaid, and which the author seems to regard as a remarkably funereal species of furniture (a view in which we cannot agree with him); there is one of the more rare phase of furniture incrusted or inlaid with stones and marbles, and which always seems to us a method at variance with the real objects of furniture design, which should aim at producing something light in comparison to its mass, and easily movable. A cabinet inlaid with such materials as marbles, tortoiseshell, &c., has a cold, glittering effect, not conducing to the comfort of a room, and conveys the idea of being at once heavy and brittle. One specimen among the modern furniture which has a certain degree of interest, is a Chinese table of the eighteenth century, carved in ironwood, on the model of European Renaissance. The carving is very elaborate in design, and, we do not doubt, very highly finished in execution, but it is strange how utterly bad in taste it is, with legs consisting of scrolls butted one against another, and looking as if the first shake would send the whole thing down; it is an instance of the degradation of taste to which a people fall who have a really interesting and original style of their own, and neglect it to take up consciously with a foreign style which they think finer. The same kind of thing is at present going on wholesale with the Japanese, who are trying with our civilisation to adopt our art and costume, of course to the detriment of their own individuality of taste and style.

It is in the two or three illustrations of Gothic furniture that we find a certain special character more unfamiliar than the types of Renaissance furniture that are engraved in the book. The English architects and art-workmen of the generation which is now getting into middle age have, it is true, seen and designed and put together a great deal of Mediæval furniture, supposed to reproduce the essentials of Mediæval work; yet how completely distinct in character from all this is such an object as the fifteenth-century chest from the Queyroy collection, which we publish,*—how impossible to suppose it a modern production. An equally characteristic and richer design is the German fourteenth-century cabinet given on p. 9 of the book, which we have not been able to find space for. The distinction between modern Gothic work and the chest we have engraved is just the distinction, difficult to define in detail, between that which is Mediæval and that which wishes to appear so. No study will get over that final distinction. A part of the character of the thing depends in this case on the very point

* A History of Furniture: translated from the French of Albert Jacquemart. Edited by Mr. Bury Palliser, with numerous illustrations. London: Chapman & Hall. 1878.

* See p. 265.

which a modern-mediæval maker would have shunned, the unmoulded, unornamented lid; a modern workman would have felt under the absolute necessity of moulding the edge of the lid to make the whole complete. The small narrow centre panel under the hasp, not ranging with the rest either in width or height, is another characteristic feature. What more resembles modern Gothic church furniture, &c., is the German chair on page 11, and one or two other pieces of work of the same kind, neat and very weak. On the whole, we can hardly say that M. Jacquemart has illustrated Gothic furniture to the extent it deserved, even in a treatise necessarily so brief in particularising. With the exception of the one we give, and the German one we named, the Gothic examples are late and weak, and their paucity contrasts with the large number of drawings devoted to Renaissance designs, which for the most part are still later and still weaker. One of them, one of the very poorest in design, the French Armoire of the sixteenth century (on page 21), is interesting, however, as showing so completely the period of transition from the Gothic to the new Renaissance taste; for the open upper panels are filled with Gothic tracery, while the doors below are carved with Renaissance arabesques, between the buttress-like stiles. As nothing is said of the doors being of later date, we presume they are regarded as of similar date with the panels. The combination is perfectly possible, but unusual, and therefore the more historically interesting.

The second book of the History is occupied with "Hangings and Tissues," including a great deal of information, and a good many beautiful and well-selected illustrations of embroidery, figured silks, tapestry, stamped leather, &c.; and the third book is devoted to "objects of art derived from statuary." This includes things which to all intents and purposes really are statuary, such as bronze figures; though such figures, in the way in which they are generally made and regarded, are, as we have before observed, more like "furniture" than most objects in which the human figure is portrayed. Bronzes, in fact, are too often bought and scattered about a room merely to look "handsome," with little thought of their individual meaning or merit of execution. It is quite in accordance with French taste, refined but not deep, that we find our author eloquent in regard to the pleasing general effect produced by bronzes scattered about a room, "their sombre hue subduing the somewhat garish appearance of cases sparkling with glass gems, enamels, and all those smaller objects of art, now become so precious, since their history begins to be written." Bronzes, in fact, are *objets de luxe*, a phrase which in itself indicates that they do not form an appendage to the highest phase of domestic art, but are rather associated with that general glitter and costliness which is only to be realised by great wealth, and at which wealth unfortunately often stops short in its art-culture. But M. Jacquemart alludes to one important point in which the old Florentine bronzes differ in artistic value from the productions of the modern magazine of *bijouterie* and *vertu*. In the fifteenth century the state of the technique of the art was such that "each artist had to invent his own processes, and do everything for himself. While the exception of a few plaquettes of very low relief, which were formed so as to issue freely from the mould without altering its edges, all had to be cast *à cire perdue*,* a difficult and costly process, as, in order to repeat a statuette, the artist was obliged to prepare a fresh model. The consequence is that every Renaissance bronze is unique, because, whenever repeating his work, the artist, it might be involuntarily, modified either the details or the proportions, or else introduced some deviations suggested by his taste or fancy; here adding one accessory, there giving greater breadth to the folds of the drapery, elsewhere more grace to the support." This is an important characteristic of the bronze-work of the period named, and gives it quite a different value from the mechanically-produced bronze casts of our day, which almost invariably have a look of artistic mediocrity, a conventional smoothness and polish, which is quite foreign to the spirit of a real art, and reduces such works to the level of elegant ornaments for a chimney-piece or side-board.

As a material for an art of this species, half an art, half an ornamental workmanship, ivory takes a high place, and is not subject to the kind of mechanical use and abuse to which a material like bronze is open. It cannot be cast, at all events; and by its tone and appearance and the delicate finish of which it is capable, ivory appears specially suited to be the material for a miniature art half related in its character to *bijouterie* and personal ornament,—for which latter purpose, indeed, a good deal of the best ivory carving has been used. The material also has a peculiar suitability for small objects of use, such as little caskets, combs, &c.; and the fourteenth-century casket of ivory with copper clasps, which we engrave (p. 265), is an admirable and characteristic specimen of this kind of application of the material, and curiously illustrative of the Mediæval combination of ornamental effect with constructive means, in the frank and bold use made of the metal clasps which hold the whole together. How beautifully ivory was used by the Germans and Italians for sculpture subjects on a small scale every visitor to the Kensington Museum knows; and on the whole we are inclined to say that the Germans have the best of it, since they adopted a more characteristic treatment of the material. For there is a certain toughness and regular grain in ivory which makes it by no means so suitable a material for all-round cutting in high relief as marble and some other substances; and much of the Italian and some of the French ivory work is really marble sculpture imitated on a small scale. But the Germans almost invariably employ a rather flat treatment in which a great proportion of the original surface is left intact, the design being merely developed in low relief by sinkings sufficient for the purpose; and this is much more in accordance with the nature of the material than the Italian treatment. But no nation of artists has treated ivory with such piquancy and effect, and at the same time with such thoroughly true feeling for the nature and capabilities of the material, as the Japanese; and we entirely concur with M. Jacquemart in the judgment which gives to them the first place in this art at all events, however their work in other branches of art may have been exaggerated in value. In their minute carvings out of small cubes of ivory, in which the very most is made of the amount of the material and the least possible of it cut to waste, there is a combination of delicacy and minuteness of finish, with a largeness of style, which cannot be matched in any other work of the kind, and combines qualities apparently so opposite that the result is a kind of intellectual puzzle, and we hardly know whether to be amused at the humour and grotesque fancy of many of these productions, or to be impressed with respect for their dignity and power of artistic style and execution.

The chapter on wood-carving has some special points and some illustrations of unique and characteristic interest; and in the chapter on terra-cotta the author touches on a point of criticism in regard to the much-valued Della Robbia ware, noting how the enamel glaze, which he pronounces a strange idea, entirely opposed to the spirit of sculpture, "with its vivid lights, its reflections and harsh shadings, deprives the modelling of its harmonious transitions, the form of its pliancy. Luca himself was one of the first to feel this, and in his more choice works he spared the flat surfaces, enveloping the draperies only in the ceramic coating, choosing colours rather dead than bright, and using polychromy but sparingly even in the accessories and surroundings of his compositions. His example was not followed, and the other members of his family, his nephew, Andrea, and Andrea's sons, Giovanni, Girolamo, and Luca, carried the style to excess. Their figures assumed a hard and rigid look in contrast with the deadly whiteness of the flesh. The surroundings, overladen with flower, fruit, and foliage, acquired undue importance, injurious to the statuesque effect of the objects. In a word, ceramic statues or medallions ceased to belong to high art proper, and passed into the domain of purely ornamental work." This criticism is only what would certainly be that of any unbiased mind in studying the Della Robbia work; but it has been so much and so unhesitatingly praised that one must suppose some of its critics have been blind to these inherent defects.

We may note in passing that there is a short section devoted to pewter work, which the author considers was an important branch of ornamental work in table utensils, &c., at one time, though from the material not being either precious or durable in itself little of it has been preserved. The chapter on glass and ceramics gives a great deal in a short space, and is accompanied by very interesting illustrations, one of which we give, that plate with the conventionalised figure of the crane, which illustrates so well the genius of the Japanese in adapting animal and bird-forms (the latter especially) to decoration, by a kind of happy compromise between the natural and the artificial. In the chapter on gems occur one or two interesting illustrations of the art of the Chinese in treating really ungrateful and untractable substances, such as jade and chalcedony. The remark upon the way in which the Chinese artist turns to account the special accidents of the latter material is sufficiently interesting to quote. "By ingenious touches he will contrive to carve out a cup of light chalcedony, shaped like a pomegranate with brown stems, upon which is perched a bird of dull white hue, for which a vein of carnelian has been utilised, while further on are creeping snails found in the crystal nodules, or some of those green-winged crickets above mentioned. In all this there is something more than mere art; there is an audacity in facing and overcoming difficulties of a far more arduous nature than that needed for cameos of various layers. For has not the workman been compelled, day by day, hour by hour, patiently and bravely to adapt his imagination to the caprices of the raw material? In dealing with such materials, no design can be thought out beforehand, it being impossible to know whether the principal nodule will prove of regular form, or whether the veins accompanying it are constant or accidental. Ready for all emergencies, prepared to take advantage even of faults in the stone, the artist thus gropes his way for months and years over a pebble, whose real value he will ascertain only after the last stroke of the chasing hammer has been delivered. Such objects can accordingly have no appreciable market value. Each is a treasure in itself, the owner of which is confident that it can never be rivalled."

M. Jacquemart regrets, in regard to these objects of Chinese art, that no artist's name is ever found upon them. Other times and countries, however, have preserved the artists' names, and one of the features of M. Jacquemart's book is the collection of a schedule of all the known names of artists in each branch of work treated of, and their dates, as far as can be ascertained. This is a very useful addition to the book, which, as a whole, we commend to our readers' attention as a broad outline of the subject of an author who fully understands it both critically and historically. The only decided fault we have to find is in the translation, which is for the most part rather stiff and wanting in style, and in not a few places most awkwardly repeats French modes of expression in too-literal translation of phrases, instead of giving the proper English form of the phrase. This has a very clumsy effect. As a whole, however, the translation is adequate to its purpose practically, though imperfect in detail.

* That is, the mould had to be destroyed in order to release the cast.

SOCIETY OF LADY ARTISTS.

THE gallery in Great Marlborough-street, now open to the public, contains 797 pictures, which represent only a portion of those submitted to the committee. If the collection show fewer central works than has sometimes been the case here, there are fewer really bad drawings. We do not pretend to have looked at the whole 800, mostly small works, and will name but a few of the old supporters of the Institution. Mrs. Marrable is in force, as usual, sending fourteen drawings, of which, No. 220, "Ancient Larches on the Roseg-road, Pontresina, Engadine," may be called the most complete. Her daughter, Miss Edith Marrable, promises to become a flower-painter. Miss S. S. Warren has some excellent landscapes. Louise Rayner, Mrs. or Miss, is better even than usual; and the same may be said for Mrs. Paul Naftel. Miss Louise Swift shows that her skill is not restricted to the depiction of dogs, and in "Anything but Comfortable" establishes a new claim. "Fruit Gatherers" (226), by Mrs. Backhouse, "The Pest House, Reigate" (526), by Marion Croft; and an "Old Orchard" (685), by Alice Squire, amongst others, have good marks against them in our catalogue.

Artists' Benevolent Fund.—Lord Ronald Gower will preside at the approaching anniversary dinner, which is fixed for the 13th of April.

PROFESSOR E. M. BARRY'S LECTURES AT THE ROYAL ACADEMY.*

ENGLISH RENAISSANCE.

I HAVE now arrived at the last lecture of the term for which I have been honoured by the Royal Academy, with the appointment of Professor of Architecture.

In former sessions, we have traced together the developments of domestic work from Roman, and through Mediæval times, and have now arrived at the period, when the first skirmishes began, which heralded the commencement of the "Battle of Styles."

The subject is too extensive to be adequately treated in a single discourse, and all I can hope to do, is to arouse, if possible, sufficient interest in the question to induce you to inquire; and also to do that still rarer thing, namely, to think for yourselves.

I spoke last week about the Renaissance in Italy, and, before I end my course, I wish to say something of the effect of the new ideas of Classical revival on the practice of our own country.

I propose, therefore, now to resume the consideration of that question, and to notice the influence of the Classical revival abroad on the architecture practised in England, immediately after the Elizabethan age. In treating of the latter, we found, as you may remember, traces of Italian influence, in both plan and elevation; particularly in the case of Longleat, attributed, as it indeed is, to an Italian architect. We shall find that this was the beginning of a movement, which was for the time to carry all before it, and to break completely with the Mediæval architecture of England.

Hitherto we have had to deal with a fusion, a Transitional period of doubt and change; but in the days of our Stuart sovereigns, the Renaissance, which had started from Italy, gained a footing in England, which it has never lost. In dealing with the new state of things in England our minds naturally revert to two great artists, whose names are inseparably connected with the architecture of their time. I allude, of course, to Inigo Jones and Sir Christopher Wren.

With reference to Inigo Jones, our information is not as full as could be wished. Descended from Welsh parents, and born in 1573, he is believed to have been brought up as an artisan, and was apprenticed to a joiner. He must have been unusually intelligent, for on attracting the notice of a nobleman (Lord Arundel, or Lord Pembroke), the latter became his patron, and sent the young man to Italy to study. Here, he found the Renaissance movement in full activity.

Inigo is said to have visited Italy about 1612, when he was nearly forty years of age. His Italian tour was not a long one, for he had to return home quickly, in order to assume the office of surveyor to Henry Prince of Wales, which the influence of his patron had obtained for him. He reached Italy at a time of great architectural activity, and must have shared in the enthusiasm excited by the approaching completion of St. Peter's, the dome of which had been finished in 1590. He probably agreed in Michelangelo's admiration for Bramante, as he thenceforward cast in his lot with the architects of the second, or Roman period of the Renaissance.

On the return of Inigo Jones to England, he found favour and honour awaiting him. Society was stirred by the reports which came from abroad, of the success of the new manner of architecture. Latin and Greek literature was found in many cultivated English homes of the gentry and nobility. King James had already earned a name for scholarship, which entitled him to be known to history by the nickname of "The Royal Pedant." The Reformation had broken the continuity of tradition, and men were asking for change and novelty.

In such a state of things, the advent of an accomplished artist, fresh from what seemed the source of inspiration, a man, vigorous and earnest, and inspired with thorough confidence in his convictions, was an event of the greatest interest. Here was a great opportunity for the enthusiastic architect. Inigo Jones came as a prophet from afar,—a master demanding attention,—a lawgiver from some sacred mountain.

He speaks thus of himself:—"Being naturally inclined in my younger days to study the arts of design, I passed into foreign parts, to converse with the great masters thereof in Italy; where I applied myself to search out the ruins of those ancient buildings which, in despite of time itself, or violence of barbarians, are yet remaining. Having satisfied myself in these, and returning to my native country, I applied my mind more particularly to architecture." From this account we notice, first, that Inigo left England as a lover of art, but not as an architect; and secondly, that he underwent the same process which had led Italian architects to the Renaissance, by a study of the remains of their ruined buildings; relics of old Rome, and ancient Greece. Inigo Jones preserved throughout his life his original catholicity of taste, for he engaged in a variety of artistic pursuits, including designs of scenery and decorations for the favourite masked entertainments of the day; he was, indeed, poet, architect, machinist, and painter.

Rejoicing in Court favour, he became "Inspector-General of the Royal Buildings," and in that capacity, was called upon to design a new palace at Whitehall, of which a small fragment only has been erected. This portion of the design, which is known as the Banqueting-house, was commenced in 1619, and is said to have cost about 15,000*l*. There is some interest just now in noting workmen's wages in those days. Mr. Peter Cunningham tells us that at Whitehall they were as follow:—Master mason, clerk of works, or inspector, 4s. 10d. a day; masons, 1s. to 2s. 6d., according to skill; carpenters, the same; and bricklayers, 1s. 2d. to 2s. 2d. These prices were fixed by the authorities. No change was permitted during the progress of the building, and power was given to compel workmen to enter the works, if necessary. The age of legalised strikes had not yet arrived.

The reputed works of Inigo Jones are numerous, so much so, indeed, that we cannot accept, without hesitation, many that are ascribed to him. The Banqueting-house, Whitehall; St. Paul's, Covent Garden; a chapel in Somerset House, since destroyed; the great western portico at St. Paul's; and the charming little water-gate, now left with cupable neglect in a hole on the Thames Embankment, are admitted instances of his work in London.

Inigo Jones also designed the Duke of Devonshire's villa at Chiswick, Wilton House, and various houses of noblemen in the provinces. His prosperity was clouded by the troubles of the times, and he lived to see the son of his original patron, King James, step from the palace he had designed to meet death on a scaffold by public execution. The artist had fallen on evil days: a courtier, and a Roman Catholic, he was, in both qualities, obnoxious to the ruling powers. He had embittered his life also by personal quarrels, particularly with Ben Jonson, and a career which began with exceptional brightness, ended in gloom and disappointment.

The works of Inigo Jones generally exhibit both originality and taste. Although he had formed his style on that of the Italian architects, and notably followed Palladio, he did not at all blindly copy their works. Thus he was far less apt to use applied columns and pilasters than they were. At Greenwich Hospital, which has been ascribed to Inigo, there is an enormous order running through two stories, and coarse in its proportions; but it is very doubtful whether this was really his own, and in all probability it may have been the work of some follower, or would-be imitator.

We may notice in most of the designs of Inigo Jones an absence of affectation, all the more remarkable when we bear in mind the extravagances of the Transitional work of the Elizabethan and Jacobean architects, to whom he succeeded; such as might be seen, for instance, in Holbein's gateway at Whitehall. His buildings often display a dignified plainness, with orders used sparingly, for porticos or other important features.

The portico was so favourite a feature in Classic days, that it was only natural, in the first fervour of imitation, to seize upon and adopt it for all kinds of buildings, even in positions where it was very unsuitable. When it became necessary to repair the west end of St. Paul's Cathedral, before the Great Fire, the idea of adding a portico was suggested by Inigo, in accordance with the then fashionable taste. He had no sympathy whatever with the old Gothic cathedral. He fancied, probably, that so barbarous a structure, as it seemed to him, must soon be swept away by the advancing taste for the Revived Italian style, of which he was the advanced practitioner.

However this may have been, he proceeded to build, at St. Paul's, a Corinthian portico, of much grandeur, and, apart from its incongruity, of considerable beauty. It had eight columns, each 47 ft. in height, with a horizontal entablature, without a pediment. It perished in the Great Fire, with the building, to which it had been added, and the site was thus cleared for new St. Paul's, the great achievement of Sir Christopher Wren.

The Banqueting-house, at Whitehall, is in some matters, as in the free use of the orders, an exception to the usual principles of design which were followed by Inigo Jones, and it even exhibits points of detail, which may be referred to the influence of the freer Transitional styles, which have lately passed under our review. It was one of our artist's earliest designs, after his return from Italy; and although he never wavered in his attachment to Classical art, his practice was probably less firm and assured at this period than it subsequently became.

In his buildings, as a rule, the horizontal principle is made to prevail. String-courses, and unbroken cornices, are employed, and grandeur is sought for through simplicity. In some cases, bold roofs appear, simple and unbroken in outline, with projecting eaves and cornices, casting deep shadows.

At Whitehall, this is not the case. The whole surface is broken up with a multiplicity of projections, and the vertical principle prevails over the horizontal, in a manner, more appropriate to a Gothic than to a Classical building. With the exception of a partially unbroken basement, every detail of cornice and entablature seems to speak of action, rather than repose; and even the sky-line would have been broken by statues, if the building had ever been finished.

In criticising this example of the talent of Inigo Jones, we must, of course, bear in mind that it is only a very small fragment of a grand design, and if the whole had been carried out, the effect of the great mass would probably have tended to subdue any undue prominence of partial detail.

The great palace at Whitehall was indeed designed, on a scale, much too grand for adoption, by a country like ours, which is ever slow to entertain great artistic ideas. It would have been too much for the present day, and for the hard times of Charles I. was altogether inappropriate. The design remains to us, however, a magnificent conception of its architect, and if it had been executed, would have been one of the finest edifices in Europe.

The building would have been 874 ft. long, towards the river; and no less than 1,152 ft. in depth, with a great central court, about 750 ft. long, by 378 ft. wide. The river front would have been nearly the same length as the present Houses of Parliament, and the latter would have been greatly exceeded in depth, and total size, by Whitehall Palace. The whole conception showed the skill and taste of Inigo Jones: and the arrangement of the masses and the angles, and the disposition of openings and piers, with the play of light and shade throughout, would have produced a splendid architectural effect.

An original feature was the so-called Persian court, which was circular on plan. Here, statues were to serve the place of columns, as at the Erechtheum at Athens. There were to be two stories in height, and in the lower floor the Doric proportion would have been used, with statues of men; while on the story above, there were to be female figures and Corinthian details.

In the present Banqueting-house, we may see the nature of the work which the architect contemplated, but he intended part of the structure to have had three stories instead of two, so as to avoid sameness and monotony of outline. This fragment of the grand design illustrates the attention given to proportion by its designer, for the balance of voids and solids is one of its most pleasing peculiarities; while it is also handsome, as a whole, without being overdone in parts. I cannot now pass in review more of the works of Inigo Jones: suffice it to say, that they all show a sufficient amount of skill, and even of genius, to entitle him to be called the father of the English Renaissance.

In the troubled times of civil discord, the arts are not likely to flourish, and the office of Inspector-General of the Royal Buildings disappeared with that of Royalty itself. After the Restoration, however, arose a new period of building and improvement, and with the opportunity came the man. This was no other than Wren, who soon occupied the place vacated by Inigo Jones, and surpassed the latter in the number and importance of his architectural works.

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* Sixth and last Lecture, delivered March 7, 1878.

Unlike his predecessors, Wren had advantages of birth and education. He was an accomplished scholar and a learned mathematician. He was early appointed to take charge of St. Paul's, and was engaged in repairs of the fabric at the time of the fire. When this catastrophe occurred, Wren was abroad, studying, it may be presumed, the works then in progress on the Continent; but his journey was stopped at Paris by the news of the destruction of London, and he hurried back to England, without going further.

It is much to be regretted that Wren was thus deprived of the opportunity of visiting Italy, and of making acquaintance, like Inigo Jones, with the leading architects of the day. It was probably due to the calls made upon him, in consequence of the Fire, that Wren determined to apply himself to architecture; for his natural bent was certainly towards science rather than art. It was, in any case, unfortunate that he should have been thrown so suddenly into architectural activity, and have had cathedrals, churches, and other buildings innumerable, placed at once in his hands.

It was not possible for one man, however ably seconded, to do his best under such pressure, and it is very remarkable that Wren was able to produce results as satisfactory as he did. The story of St. Paul's is, doubtless, known to many of you, and as I dealt with it on a former occasion I will not repeat it here. Suffice it to say, that the result, as a whole, is a splendid evidence of Wren's genius. Hampered in various ways, with but little encouragement, and many difficulties, he gave us a building which, in some respects, is without a competitor.

St. Paul's has not the dimensions nor the internal magnificence of St. Peter's at Rome, but it far surpasses the latter in beauty of exterior. The dome of Michelangelo is splendid within, far more so than Wren's; but it has little external effect, and none at all from the Piazza, whence it is concealed by the rococo front of Carlo Maderno. At St. Paul's, the dome is lifted up in dignity. It is supported by the western towers, which contribute, by contrast, to its effect, and the whole external view of the cathedral is very striking and satisfactory as an architectural monument.

It must be borne in mind that Wren was called upon to undertake a task of no ordinary difficulty. The style of architecture which was fashionable was not the style in which men had been accustomed to work, and, least of all, were they prepared to see cathedrals and churches built in any other architecture than Gothic.

Wren applied the new Renaissance taste fearlessly to all buildings, and when he attempted any imitation of Gothic forms, his usual success failed him. Of such attempts, the western towers of the abbey at Westminster, are an example, and, at the same time, a warning.

At St. Michael's, Cornhill, at St. Dunstan's-in-the-East, at Warwick, and a few other places, Wren adopted Gothic details; but his heart was not in his work, and he was probably controlled as to their use by special circumstances.

Among his Classical designs for secular buildings, the library of Trinity College, Cambridge, deserves notice. It is simple in principle, consisting of two stories, each of which is arcaded, with an attached order. The upper story is devoted to the library, while the ground-floor is open, as a cloister. The design is appropriate for the purpose intended, and, notwithstanding its simplicity, is pleasing and dignified in effect.

Perhaps, however, the most peculiarly successful of Wren's works is the tower and steeple of Bow Church, in the City of London. The Renaissance was hardly a tower-building, and certainly not a steeple-building, style. Its application to such a purpose was consequently an experiment. Wren faced the difficulty, however, and produced a very beautiful work. Starting with a tower of much plainness, he made the base of his spire circular on plan, and surrounded it with columns, giving a great play of light and shade. Above this Corinthian peristyle a range of boldly-moulded trusses intervenes, as an introduction to the lantern above, which is, in turn, surmounted by a short spire.

The effect of the whole structure goes far to prove that, in the hands of genius, even an intractable style may be so handled as to produce beautiful results. The steeple of Bow Church is by far the best of the many similar structures designed by Wren, and it is, perhaps, the best of its peculiar style which exists anywhere.

That Wren was a scientific architect is manifest,—not only from the skill displayed by him in construction, as at St. Paul's, but also from the cleverness and ingenuity of his plans. Among the latter, the church of St. Stephen, Walbrook, holds a foremost place. Although the dimensions are small, the ingenuity of the arrangement of the internal columns is such, that a great impression of size is produced, together with great variety, and a most pleasing effect of chiar-oscuro. The columns in the body of the church support eight arches, so planned as to form an octagon, from which a dome springs. The latter is enriched by panelling, and is lighted by lunette windows, in the octagonal stage.

It is not easy to describe the merits of this very clever interior, and I strongly advise students to go and see it for themselves. Wren's weakness here, as elsewhere, was in detail; and this was probably the result, in many cases, of undue haste, and of the pressure of a large number of important works at the same time. In Grinling Gibbons, he was fortunate enough to find a most accomplished carver, and the amount of work executed by the latter was very great; but in many instances his assistance could not have been available, and the ornamental details of Wren's churches are often rough and crude, though seldom destitute of a certain boldness and largeness of effect.

Wren himself was an artist of grand ideas, as was shown when he was called upon to produce a plan for rebuilding London. The state of things previous to the Fire has been before described, with the wooden houses projecting story beyond story, and the narrow streets, inviting plague or conflagration. These had been destroyed, and a great opportunity had consequently arisen for the improvement of the metropolis.

Wren proposed a system of radiating streets, and a great river embankment. On the latter, he would have placed the rebuilt halls of the City companies, and would thus have lined the river with palaces. His general plan has been criticised as too formal, and as having a tendency to produce the dull monotony seen in some regularly-built cities, such as Turin.

In truth, however, Wren's proposals are scarcely fairly treated by such a suggestion. Althongh he would certainly have given us spacious and direct thoroughfares along the chief lines of traffic, he by no means followed any uniform treatment throughout, and the different levels of London would in themselves have been a great safeguard against sameness of effect; while, as regards the river, its curves and reaches would have exerted a similar influence.

On the whole, it is to be regretted that Wren's plan was abandoned, and that we have consequently been left to attempt to remedy, partially, and at enormous cost, the evils, many of which he would have removed, once for all. His plan shared the usual fate of all comprehensive schemes with us, and was abandoned in face of the opposition of the private interests, which it aroused.

Wren's scientific skill was apparent in all he did, from the often-abused cone in the dome of St. Paul's, to the cleverly-designed wooden roof of the Sheldonian Theatre at Oxford, where a space of 80 ft. wide is covered by a single span.

As to St. Paul's, the great external effect of the dome, apart from beauty of outline, is due to its height, while the internal dome is certainly quite high enough, and indeed perhaps too high for a quite satisfactory result. There is a difference of height between the inner and the outer dome of some 50 ft., and Wren filled the intermediate space with a brick conical structure to support the stone lantern above.

This arrangement of a double dome has been denounced as an unworthy expedient, and a constructional falsehood. What, however, was Wren to do? Was he to ruin the unrivalled effect of the exterior of the dome by lowering it? or was he to raise the inner dome, which is already too high? If he were able to avoid both horns of the dilemma, by an expedient of most ingenious construction, it is difficult to see why he should be blamed, especially by those who detect no impropriety in a Gothic spire or flèche, and who consider a high wooden roof, built over a stone inner groining, an admissible and praiseworthy manner of building.

In estimating Wren's claims allowance must be made for the circumstances of his time; the novelty of the application of Classic forms of architecture; the want of skill, in such work, of the artificers employed; and the sudden and immense demands on the architect's ability and taste. When these facts are borne in mind, the verdict of history upon the career of Sir Christopher Wren will not be doubtful. To him, and to Inigo Jones, the Renaissance in England owed its first vigour, and their works have not as yet been surpassed.

It must always be remembered that our two great English architects were placed at much disadvantage, as compared with the architects of the Italian Renaissance. The latter had not to look abroad for information or precedents; they were at home with Italian forms and manners; above all, they were part of a powerful and united band of artists, bound together by common associations, and by a popular enthusiasm for literature and the arts, whether painting, sculpture, or architecture.

In this country, the impulse towards the employment of Italian architecture, came from above. Inigo Jones was emphatically a courtier, and Sir C. Wren owed his great opportunities mainly to royal influence.

England has never seen a republic of art, in the same sense as Italy. It has been her lot to follow, and not to lead, and it was impossible for her to show the feelings of delight with which the Italians saluted Rome as "mistress of the world" in law, religion, and in art, with an outburst of sentiment, at once artistic and patriotic.

Although, however, the new manner was tardily adopted in our own country, it made its way surely and thoroughly, and, until times comparatively recent, our principal buildings have been designed in some form of Classical art. They have, however, almost always lacked the distinguishing merit of Italian work, the association of the arts. They have had no Michelangelo to make their, walls eloquent and their ceilings glorious. The charms of Raffaelle, and the grace of a Leonardo, have been denied them, and thus the English Renaissance has been but a movement, partially completed.

The Italians had always been accustomed to wealth of decoration, and even in their Mediæval buildings, as for example, the Cathedral of Siena, every part glowed with colour and decoration. The simplicity of Early Christian days had become transmuted into a system of gorgeous spectacles, with all that could attract the senses, engaged in the service of the Church. Holy things and relics were enshrined in gorgeous temples, and churches became artistic treasure-houses.

The Italians loved detail, and lavished their wealth of art on every separate part of the structure. At Siena, it is not the building itself, striking though it be, that delights the spectator, so much as the beauties of parts, isolated apparently, and full of variety, but contributing to a richness of general effect an amount of special interest, to be sought in vain in structures more dominated by a single mind.

As a contrast to such principles, we have but to consider our own St. Paul's. Here, we have the governing architectural thought made so clear, that nothing is left to the imagination. A few large and not very refined details are repeated, but not to a sufficient extent to give either the idea of space or mystery. Large as it is, the interior suffers in apparent size, from the want of detail.

A few features, however grand in themselves, can never produce the effect of small parts often repeated, as in the case of the Gothic cathedrals. This was one of the conclusions which the Renaissance architects were slow to accept, with the frequent result of comparative failure, particularly in their architecture of interiors. The absence of internal detail was, to a great extent, forced upon them by the painters. The latter required great spaces for their works, and dictatedtheir own conditions. Painting was emphatically the great art of Italy, and to it all was subordinated. It was to the Italians all that sculpture had been to the Greeks, and it ruled supreme over the Renaissance.

In England things were otherwise; not only had the Northern principle of Mediæval architecture varied essentially from that which prevailed in Italy, but the then existing circumstances of the country were altogether different. The scientific working out of a single design, in the great buildings of England, allowed a diminished scope for individual detail, whether of painting or of sculpture.

Although we had shared in the religious development which had everywhere filled the churches of the old faith with shrines, images,

and pictures, these artistic accessories to architecture had been less willingly accepted here than in Italy, and at the time of the Renaissance had been roughly thrust out by a burst of iconoclasm.

Wren was consequently not free to do his best, but had to reckon with the Puritan view, that art and religion were opposing foes. This is a creed which has ever had supporters, and it is well for us to ask, Is it true? If it be so, we might almost conclude, in all sadness, that a Christian man ought not to be an artist.

At the outset of Christianity, when the neophytes of a new faith hid themselves among the rocks, and crouched in catacombs, it was natural that the spiritual life should claim their entire thoughts, to the exclusion of all else. Revolting with their whole soul from pagan practices, all that savoured of them was of necessity odious.

The early Christians were engaged in a battle for existence; a mortal conflict, calling for all the patience of conviction, and even the energy of fanaticism. It was inevitable, therefore, that their attention should be concentrated on the invisible ruler of the world, rather than on its obvious beauties. The arts would thus easily come to be thought unholy, and it was left to other, and calmer times, to appreciate, in all its grandeur, the lesson that human nature is itself a Divine Creation, and that nothing has been created common or unclean.

The Renaissance was a movement of revolt against asceticism. It asserted freedom, and claimed the privileges of liberty. Artists would not be satisfied always to work within the narrow bounds prescribed by ecclesiastical traditions, they declined to walk any longer with monastic leading-strings. They did not, however, seek to break with the old system, but rather to develope it. They would still paint saints and sacred mysteries, but they would do so in their own way. All the resources of art should still be at the disposal of the Church, but they should be governed by Genius, working in a spirit of Freedom, rather than of submission to external authority.

There was no trace of Puritanism in the art of the Italian Renaissance,—rather, indeed, the principle was paramount of offering all that was costly and precious in the sanctuary. The love of natural scenery came later, and almost as a consequence. The conviction that it was lawful to indulge the senses reasonably allowed men to see beauty in everything around them, and it was not a pagan instinct which led them to look at snow-clad peaks, and smiling valleys, as temples of the great unseen Power, which the early Christians had approached in awe and tribulation.

Surely, it might be felt, this world of ours, with its infinite wealth of all that charms the sense of beauty, has not been so endowed in vain. We may seek to follow a guidance, felt, as well as seen, and an imitation of principle may even be regarded as an act of worship.

It seems to me a great error to class the Renaissance artists with those who appeal only to pride, ostentation, and such unworthy motives. Michelangelo, at any rate, was ever wooing the ideal, living in a world of his own, scorning and eschewing the pomps and luxuries placed freely at his command. Look at the grand old man, in failing health and strength, toiling at his immortal work at the Vatican, and say if he can be accused of displaying in his person, either weakness of devotion or meanness of principle. His intense enthusiasm, and his haughty energy in the worship of his art, through the wintry days of a long old age, have in them something startling, before which criticism may well shrink back, with a feeling of reverence in the presence of genius.

Turning again to England, we have to deal with architecture, temporarily divorced, as regarded ecclesiastical buildings, from painting, and, to a great extent, from sculpture also. The Reformation had broken with the old compromises between art and legend. Our churches had been ransacked, and images and pictures were alike forbidden.

The Renaissance in Italy had been a return to the glorifications of nature in art. In England, it seemed for a time to wish to drive from us the attractiveness of beauty, and to be content with half-realised suggestions in place of perfect artistic work. If, therefore, we find coldness and formality in the designs of our great architects, Inigo Jones and Wren, it does not follow that the result is due to their failings or to the deficiencies of the style in which they worked, but rather to the circumstances of their time, and the influences by which they were surrounded.

There is no doubt that Wren, at any rate, desired to see the interior of St. Paul's present a very different appearance from that which now exists. He knew, probably only too well, how hopeless was the struggle against the ruling dislike of colour and artistic decoration, and he was thus compelled to leave to others a task he must have longed to perform himself. There are many details in the interior, now obnoxious to unfavourable criticism, which might, in all probability, have been very differently arranged by Wren if he could have felt that the artistic imagination of others was ready to combine with his own in the production of a perfect monument.

The English architects had not the encouragement which was derived by the Italians from the enthusiasm of their countrymen. They worked, as we have seen, at the bidding of the Court and aristocracy, rather than to satisfy a public and general demand.

In Italy, success in the arts was an aim of patriotism. City vied with city in warm artistic jealousy, and we see Venice competing with Florence, and Rome with both, for the possession of Michelangelo. The great works of the day were chiefly those of public utility, paid for by public money, and devoted to the public use. They were thus essentially democratic achievements; for, although many were carried out nominally by despots, the latter knew that their position could only be maintained by complying with popular demands. These, in each little State, took the shape of recognising that their cities should shine, not only in works of usefulness, but also in treasures of artistic beauty.

In England, St. Paul's was an exceptional case, and the cost of it was paid by taxation; but in most instances we can only investigate the Renaissance amongst ourselves, in examples of palaces, and the private mansions of the nobility. The English assertion of individual freedom, passionate in its intensity, has too often seemed to obscure the duty of public co-operation, and the richest nation of the world is thus always found too poor for any comprehensive encouragement of art.

Millions upon millions are readily forthcoming for warlike charges, while the arts of peace are neglected, and even the great national buildings, which are absolutely necessary for public business, are starved of artistic completeness, and shorn of essential architectural features, at the bidding of a miserable self-called economy.

At the same time, and in the same breath, we are taunted with our inability to make bricks without straw; and it has even been declared to be an object of public policy to cease to employ the trained and practised architect in the service of the State, and to hand over our public buildings to the unknown and practically irresponsible clerks of a "Department."

The late Professor of Architecture in this place, Sir Gilbert Scott, recently complained at the Institute of Architects, that he had heard that "Government was thinking of renouncing the employment of architects, and of substituting officials and clerks in their place; if this were true it would show that our governors were incapable of appreciating the services rendered by architects to the country."

If this proposal is to be adopted generally, as it has been partially, we may point out that it is impossible to imagine a course of action more calculated to discourage genius, or the rising talent of a great profession; and the question may be well asked, Is it fair to the public? Have they not a claim to the very best which any profession can supply?

It is possible, of course, that the bureaux of our Government Offices may be, for the moment the places in which to look for unknown Wrens and Michelangelos, hiding their light under a bushel, and bending their necks beneath a clerkly yoke. Such cases, however, must be exceptional. Our Departments may for a time be specially fortunate, but in the end the inevitable result must be a reign over our public works of a system of tame, if safe, mediocrity, under a *régime* of clerks, recruited, ultimately it may be, from the ranks of "those who have retired from business, or from whom business has retired." Will such a result be just to the public, or encouraging to art?*

If the art history of Italy can teach us nothing else, it can, at least, show us a time when men cared about art; when Prince and people united to honour the artist; and when great cities turned out their thousands to walk in procession after a work of genius, or to follow a great painter to the grave.

The Renaissance also can indicate to us a path by which an advance may be made, even if we are unable to accept its principles unreservedly. It was a time of energy, an age of determination to carry out not only artistic decoration, but also the necessary public works of utility, demanded by the large populations which were beginning to gather in the fair cities of Italy. It was the great ambition of the artists of the time to improve and adorn their native places.

In this nineteenth century the state of our huge towns is too often an opprobrium not only to the architect, but to our public policy. I have, on other occasions, spoken to you about the houses of the poor, and the urgent need that exists for their improvement. Before we can even begin to hope for art progress, the first necessity is that the people should be supplied with pure air and pure water. The old Roman aqueducts have excited the admiration of ages, and the Renaissance architects had their examples to follow, while Leonardo da Vinci did not think it inconsistent with the claims of art to busy himself with the irrigation works of hydraulic engineering.

It is only of late that a tardy recognition of the importance of such matters has arisen amongst ourselves. Something has been recently done, by legislation, to improve the dwellings of the working classes, and, in reference to water supply, all must have noticed with satisfaction that no less a personage than the Prince of Wales has lately addressed the Society of Arts on the deficiencies, in this respect, of our great towns, and has requested the Society to bring about a discussion and consideration of this important subject.

Few more pressing or more difficult questions could claim the attention of the Heir to a Throne, based upon the affections of its subjects, and the occupants of which, in our own times, have ever displayed the warmest interest in the welfare of the humblest of the people. It is admitted that many modern problems are not easy to solve; but in this case, shall it be said that modern England quails before a difficulty, which was surmounted in the far-off days of ancient Rome, not to speak of the more modern history of the Renaissance epoch?

We have lately heard much of schemes for bringing water to the manufacturing districts, from quiet mountain lakes; and anxiety has naturally been aroused, lest such attempts should rob the latter of their tranquil charms. Man, however, is more than scenery, and for his needs water must be had. The ancient aqueducts already referred to had merits of their own, and did not necessarily injure the landscape. Let us hope, therefore, that some way may be found to reconcile opposing views, so as to provide a necessity of life for millions, without injurious interference with the sylvan beauty of lake or valley.

We may be sure that every artist, whether architect, painter, or sculptor, is interested in the cleansing and amelioration of the homes of the masses. Without such primary improvement, it is idle to talk of interesting them in art, or to dream of a regeneration of the national taste.

This may come later. In the meantime, architects should encourage, by every means in their power, all well-planned efforts to bring "Sweetness and light" to the dens and alleys of our densely-populated cities. When such good works have been done, we may hope for better things, while, for the present, we may at least decline to accept the conclusion that there is nothing for us to do, but to sink, with languid dismay, into a hopeless Slough of Despond.

We may surely ask, after the experience of both Mediæval and Renaissance days, whether our own nineteenth century can do nothing for art? Is it, indeed, too late to cleanse, improve, and adorn our grimy hives of industry—to bring culture and beauty to the homes of our

* On this point, consult the official evidence given in 1877, before the Committee on Public Offices and Buildings (Parliamentary Paper No. 312). It is to be regretted that independent witnesses were not examined, as to the true interests of the public, and those of the architectural profession, in this important matter. Rightly understood, these interests are identical. It is not the way to obtain good architecture to discourage a responsible profession by withholding from it the prizes of an honourable ambition. It cannot be for the public advantage, any more than is it fair to architects, to put out the designs of our public buildings, as it were, to contract, by a political department, supported out of the taxes, some of which (as the income-tax) press with special severity on the precarious earnings of professional men.—E. M. B.

vast population? May not our people, at least, be enabled to wash and be clean,—clean from the debasing associations of squalor and hideousness; clean from the stains of selfishness and greed; and thus become ready to combine to carry out those public improvements which exalt a nation, while they dignify society, and glorify art?

If we have much to do, we have also much wherewith to do it, and have not the excuse of the wagoner in the fable, for sitting like him idle, and with folded hands, lamenting, it may be, the degeneracy of the age, the faults of others, or anything rather than our own lack of determination and good will.

If Englishmen were really in earnest, what limit need be placed to their achievements in science or in art? Science, indeed, takes care of itself. It even seems to some of us to tend to thrust out art from its proper place in the affairs of men.

This danger, however, can only become formidable when art declines all sympathy with the aspirations of its age. Architecture, in any case, cannot take such a position, for her claim is to assimilate science, as well as to nourish art. The old buildings which surround us are scientific, as well as artistic; and the cathedral of our forefathers is often a truer example of science, than the hideous railway sheds, which we know, alas! so well. The difference between the two cases is, that the one was governed by the resolution to do the best that was possible; the other, by the obligation to obtain the quickest and the cheapest result.

The one was the chosen task of a community, obeying its recognised leaders, and working cheerfully, with high and disinterested aims; the other is the speculation of private persons, toiling painfully, with a natural selfishness, in the pursuit of gain.

All artistic progress in the future must be sought by enlisting public sympathies; the schoolmaster must show himself abroad, in art, as well as literature; and artists must know how to educate their critics. Modern legislation is all in the direction of free local government, wealth abounds throughout the land, and there is therefore no reason why our towns should not vie with each other, as did the Italian cities of old, in works of art, as well as in those of utility.

Then may we hope for a public feeling for culture, refinement, and for art, which may perhaps entitle some future chronicler to speak of the Victorian era as of another, and a better Renaissance, not of architecture alone: a Renaissance of all that purifies and gladdens the mind of man, and leads his thoughts to those higher and diviner aspirations which even an infinite future may seem too small to satisfy.

"THE LITTLE ARTS" IN THE PARIS EXHIBITION.

THE French do not catalogue even their own display very methodically, and if the actual arrangement of the forthcoming Exhibition be not more systematic than the official description of it, the palace will be somewhat of a labyrinth to its visitors. Mountains of metal, timber, India-rubber, sponges, silks, cloths, and cannon appear as if heaped up around rich cases of diamonds and emeralds, opals and sapphires, with coral and other substances, the principal value of which is derived from the artistic workmanship employed upon them. Composed amid these, moreover, we find evidences of a growing taste for articles imitated from the antique or from the East, as in various suites of so-called Greek, Roman, Pompeian, Etruscan, and even Egyptian furniture, the chief part of which must be the merest guess work, authorised to some degree, no doubt, by a close study of what few examples have been illustrated by ancient paintings or sculpture. The ground is surer when we reach the Middle Ages and the Renaissance, whether in France or Italy, for England cannot be said to have been much influenced, in these matters, by those great movements of the human mind. There is a complete set copied from the beautiful Sauvageot collection in the Cluny Museum, with its ebony chests, carved into arches and pilasters, incrustations of ornamental stones, mosaic and ivory, and infinitude of secret drawers. Side by side the great firms of Rondillon and Fourdinois are not absent, with their almost monumental achievements in varnished and gilded pear-wood for which what is familiarly called a "rage" has set in within the last few years. That which strikes the imagination at once is the enormous size of the rooms destined to be adorned by these colossal cabinets and mirrors, doors and pedestals, and the wealth of the people who are expected to purchase these frames of jewelled Venetian glass, coffers covered with inlay, and porcelain sets in the style of Bernard de Palissy. With some allowable pride, we are promised a wonderful cabinet full of Algerian onyx, placed in an alcove sculptured in the same material, with figures of slaves whose flesh is silver, whose ornaments are gold, and whose garments are of the now famous black and brown African marble. This assemblage of objects wrought from one material is likely, at all events, to be sufficiently varied, including as it does elephants' heads supporting huge fonts, vases of every size and shape, basins for fountains, imitations of enamel clock-cases, watch-stands, and those thousand-and-one trifles that brighten the arcades of the Palais Royal. The Bacarrat glass, again, is said to be far more splendid, even, than it was ten years ago, when it excited universal admiration; but it will have this time to maintain a close rivalry with the fabrications of other houses which have since sprung up in the towns of the Meurthe and the Moselle. It is very justly remarked, in one of the prefaces, that glass, as an art material, labours under many and serious disadvantages. Even when coloured, its use in ornamentation is exceedingly limited, and never rises above mere gaudiness and glitter. The purest crystal itself can only be wrought into a limited variety of tasteful forms. Attempts were made, no doubt, in 1867, and are being made again, as we perceive, this year, to adapt some of the best blown qualities to the higher purposes of decoration; but all experience shows that, in statuary for instance, the most beautiful models become absolutely hideous,—a transparent human figure, above all, would be a monstrosity, though some ingenious Italian, it is to be remarked, has conceived the idea of representing the anatomy of a full-sized man by means of different tints and degrees of opacity in glass, an experiment likely to prove in the result more curious than admirable. For fruit and foliage, moreover, the material is almost entirely unmanageable; but, on the other hand, glass, if it can never be reconciled with art, in the strict sense of the term, approaches very near it on the engraved surfaces of goblets, and quite attains the standard in enamels and illuminated windows. We see a considerable number of specimens catalogued, with Egyptian vases in artificial crystal, a vast *bol à punch* in blue, figured all over with dancing satyrs and bacchantes, and surrounded by a cluster of drinking-glasses to match; imitations of the ancient Venetian manufacture in the Cluny Museum, and of the modern one at Murano itself, and, once more, that strange combination of glass with bronze, which is more satisfactory to some tastes than to others. However, it will be interesting to note how far an advance has been made in these and the kindred ingenuities of which so prodigal a show may be anticipated.

Of course, the celebrated fabrics of Sèvres, Beauvais, and Gobelins will put in their appearance on a grand scale; but in this department nothing new can be expected. It suffices if those unrivalled manufactures retain from one period to another their ancient pre-eminence; since we can hope for no fresh secrets discovered of "paste on paste," of porcelain moulding and painting, of "cameo-china," of "royal blue," or that inimitable green which Fragonard, among the artists of living generations, has best succeeded in reproducing. In respect of other pottery, the French editor confesses to anticipating that Limoges itself will succeed in establishing no superiority over Staffordshire, albeit that it enjoys the advantage of being the natural country of the most precious clay,—*le pays de kaolin par excellence*. But the two districts are hardly brought into any real competition, their products being for the most part essentially dissimilar, and we may look for the usual excellence from that poor Limousin region which can hardly be said to possess any other wealth, but which grows more and more ambitious in applying the process, comparatively new to its artificers, of putting colours on porcelain, and of giving it the lustre of enamel. The real rivals of Limoges, in France itself, will be represented from Berry, Melun-sur-Yeyvre, Noirlac, and Nevers,—all rising into fame, more or less, on account of their fictile manufactures, and aspiring to colour their paste without the use of the actual painting process, wonderful effects of sea-green especially, on a white ground, being thus produced. With china, as the French pretend to distinguish it from porcelain, many an interesting cabinet will be filled, imitative of those enamelled wares so much in vogue in the sixteenth century, and brought to such perfection by the celebrated makers of Rouen, Nevers, and Haute-Vienne. Judging, however, that which will be seen in the Exhibition by that which may be seen out of it, no modern revival has taken place in this sphere of art, and the yellow-browns of the latter half of the nineteenth century may no more bear comparison with the originals than those "Japanese" jars which never travelled further than a few miles from Paris. It seems impossible, whatever care is exercised, to keep out a certain proportion of trumpery, nor will the great Paris Exhibition of 1878 be, in this respect, exceptional,—with its long list of gilt lamps and clocks, flashy bookbindings, meretricious engravings, and whole galleries of photography, though this last is likely to show off to better advantage than some others. The English had their pyramid of gold in a former structure; the Belgians undertake to have their pyramid of silver in this, as, indeed, England will also; which the Germans intend to supplement with a pyramid of coal,—that is, unless they adhere to their original intention of not being represented at all, except in the art-galleries. Turkey proper is absent; but not so Russia, which is again to contribute her malachite trophies, though they hardly take rank in a catalogue of "The Little Arts," so dear to Parisian caprice,—dainty fountains of perfume from the Rhine, sculptured frames in a peculiar black wood, somewhat resembling ebony, from Baden, trinkets from Bohemia, pipes from Vienna, and toys from Switzerland. The Swiss, too, are conspicuous with their musical boxes; the Spaniards with earrings, statuettes, and guitars; and the Greeks with their daggers and swords. As usual, the manners of the Northern nations are illustrated by the collections of their unique popular jewellery, so to term it, in solid gold, while Italy, in addition to its Murano crystals, ancient and modern, mosaics studied from famous Middle-Age designs, and porcelains,—still imitations,—from Urbino, Faenza, Gublio, and Pesara, is to have rich sets of furniture in the old Florentine style, large examples of marqueterie, in holly and orange, and ebony, besides numerous sculptures "in the solid" as decorations of cabinet-work. It is remarked by the French catalogue critics that the English generally dress up their "stalls" with fantastic figures,—as, for example, groups of statuary in soap, architectural effects produced by an ingenious arrangement of bottles, obelisks of wax, and arches of spermaceti. Leaving, however, these "little" for the finer arts, we shall meet with the familiar names, Carpeaux and Cabanel, Meissonier and Jourdan, Bellangé and Brion,—artists, dead and living, whose works will, in either case, be forthcoming, and fill the magnificent space which France usually appropriates to herself, with a perfect right to do so, in these matters. We are never likely to miss Gérome or Jourdan, Rousseau or Jalabert, from such a rivalry; but it is somewhat contrary to the principle of exhibitions that the same objects should be presented to view over and over again. Whether this will be the case next May, there are few means of judging beforehand, the catalogue of this department being, as yet, in a most imperfect condition. This remark does not apply, however, to another interesting branch of the great display, which is a comparative view, based to some extent on the model of 1867, of industrial and mechanical progress in all countries and ages, so far as the subject is illuminated by the relics, fragments, and illustrations that have come down to us. Every deeper glance, indeed, into the official recapitulation of the contents of the French Palace of Art and Industry in 1878, enlarges its promise of interest to all the world—all the world, at any rate, which is not too busily engaged in fighting. France, at least, is determined that nothing shall interfere with her favourite project.

The Journal of the Society of Arts states that the prize of 10*l*., and the silver medal offered by the Society for the best guinea set of blow-pipe apparatus, has been awarded to Messrs. Litchen, of St. Day and Camborne, Cornwall. The competition was sharp.

WHITBY.

ON the north-east coast, perhaps the truest type of an Old-World town, adapting itself to the changing circumstances of to-day, would be Whitby. It dates far back into the misty past, possibly occupying the site of an ancient Roman town, and certainly carrying memories back to the Saxon Streoneshalh. From about the time of the Norman Conquest, the place has been known under its modern name; and it is therefore one of the oldest of the north-eastern coast towns. Gradually its character has been changed; and down the stream of time it has known many trading mutations, quietly, however, pursuing the even tenour of its way. The alum trade has flourished and decayed in its vicinity; the Greenland fishery has risen and set; rope-making and other allied trades have passed their meridian; its wealth of shipping has fallen off in some degree; the iron trade, or rather the export of iron ore, grew and declined; and the jet manufacture, after attaining large dimensions, seems to be now receiving a check; whilst the character of the town as a health-resort is now increasing.

Forty years ago, Whitby was one of the chief northern ports,—certainly chief between Bridlington and Sunderland. It had then between 250 and 300 vessels, with a tonnage of some 50,000, and with above 2,500 seamen. Now, it has registered as belonging to the port 197 sailing and 26 steam vessels, the aggregate tonnage of which is 53,152 tons; so that, as regards ownership, it is stationary. The number of vessels entering the port varies much, but the tonnage of the sailing vessels that enter with cargoes is about 20,000; and that of the steam vessels 56,864 tons; the clearances with cargoes being larger of sailing vessels and smaller of steam vessels. Dealing still with matters maritime, it may be said that the old wood ship-building industry is now dead, but that iron shipbuilding has taken its place, and on the little river Esk there are yearly launched about five steam vessels, the tonnage of which in the latest year was 3,745. The Greenland fishery has departed, but the port of Whitby is still the place from which a large fleet of fishing-vessels hail: the number registered under the Sea Fisheries Act being 254, requiring 809 men and boys to work them. In the limits of the port 240 men and boys are classed as regularly employed in fishing, and 150 persons are said to be occasionally employed in that pursuit.

A curious chapter in the history of Whitby, and one little known, is its connexion with the development of the Cleveland iron trade. It is usually supposed that that trade was the result of the fortunate find of ironstone by a sportsman on the hills to the east of Middlesbrough. On the contrary, prior to that which has been styled the "commercial discovery" of the Cleveland ironstone, there had been a working of that iron at the southern part of Cleveland, and of the ironstone so wrought to considerable extent Whitby was the port of shipment. Although the iron trade of Cleveland is of comparatively recent origin, the existence of the beds of iron has been known for at least fifty years. There had been workings on the coast a year or two before, but practically the utilisatior of that ironstone dates from the opening of the railway from Whitby to Pickering, which traversed some of the romantic Yorkshire dales, and in so doing laid bare ironstone. A company,—the Whitby Stone Company,—was formed, and it supplied ironstone to some of the blast-furnaces which had been built a few years before near the river Tyne. Gradually, as the folly of depending for supplies of ironstone found in the coal measures was learnt, the bulk of the proprietors of blast-furnaces on the Tyne arranged to procure their supplies from the South Cleveland district. The new trade for Whitby shared the varying fortunes of the iron trade for a few years, and in 1843 it fell off almost entirely, but in a year or two there was a revival, there was an increased demand for iron, the number of blast-furnaces in the north was enlarged, and the shipments of ironstone from Whitby rapidly rose in quantity. Ultimately, from the quarries of one firm some 30,000 tons of ironstone were sent yearly, and the total was only kept in check by the incapacity of the harbour at Whitby to accommodate a larger number of vessels. The change which was made in the position of the iron trade of Cleveland by the discovery of the iron in the north of Cleveland, and which was the result of a system of careful investigation, is tolerably well known. Although the dependence of the northern furnaces on the South Cleveland deposits was done away with, and although the dreams of the early pioneers that the Vale of Esk would become the centre of the Cleveland iron trade have never been realised, yet the iron trade has been established in that Vale, and has given to Whitby considerable support. The shipment of ironstone fell off, in part through the discovery of the immense iron deposits in the north of Cleveland, and in part through the wretched facilities for shipment Whitby afforded. After having given impetus to the search for the northern ironstone, and contributed to the development of a vast trade, Whitby now derives no direct advantage from it, but it still indirectly benefits from the mines and furnaces in its vicinity.

A peculiar trade in Whitby is its jet manufacture, which has now attained very large dimensions. Found along the coast and in the Cleveland Hills, the industry, as it is locally called, of "jetting," finds fluctuating employment for a good many men, and in Whitby the jet trade gives a considerable if varying number of persons work. It was estimated some time ago by a high authority, that the value of the jet found in the Cleveland Hills was about 20,000*l.* yearly, and it has since been stated that there was annually received in Whitby for the manufactured jet, and for the settings employed to display it, no less than 50,000*l.*; and this amount was, on the authority of those in the trade, said to be doubled five years ago, when it was also added that from twelve to thirteen hundred persons were employed in the trade, or about one-twelfth part of the whole population. Like most industries depending to some extent on the changes of fashion, the jet industry fluctuates very seriously, and since the time named, there has been a serious retrogression both in the manufactured and in the crude jet trade. There has been a falling off in the demand for the native jet, because foreign is, we regret to hear, procurable cheaper, and there has been a lessened demand because of the absence, up to this time, of any Court mourning in Europe. Hence there has been depression in this peculiar industry. Dependent upon the industries which have been glanced at, there is a population which at the time of the last census was stated at 12,460, whilst around it, and in some measure contributory to it is, in the union or registration district, one of 25,791 in the 82,237 acres. In that district also there are 646 paupers,—a considerable diminution on recent years, and one in proportion to population more favourable than in the bulk of the districts around it. In the course of its long existence, Whitby has fully gathered round it all the institutions which befit and are acquired by towns. Alike in matters physical, mental, and spiritual, it has the associations needed for the health of the threefold nature of man to the full that its size and importance give ground for expectation. In recent years, whilst developing some of its peculiar industries, it has more and more fitted itself to fulfil the mission of a health resort; and alike by reason of its accommodation, of its situation on the margin of the ocean, and in magnificent and varied scenery, it has attractions which give it no small claims. Not dependent wholly upon this, as are some health resorts, it adds to its revenue from this source the income which arises from its shipping, its shipbuilding, and its jet industries; and with its prosperity thus based on a more than triple support, whilst not expecting to attain the greatness some north-eastern towns have achieved, and which others have had thrust upon them, it should retain the importance it has acquired in centuries; and as it obtains fresh outlets for its trade, and inlets for its pleasure-visitors, its growth should be sure if slow, and solid if less marked than some of the towns to which it will shortly be brought, in point of time, nearer. The value of good art in developing its jet trade, often before now urged in these pages, and admitted by foremost spirits of the town, must not be lost sight of.

Hove, near Brighton.—At the Hove Police-court, a builder, named Lidbetter, appeared to answer four summonses taken out against him by the local authorities for breach of the bye-laws. The offences consisted of erecting party-walls to houses in Hove, not of the thickness and stability required by the bye-laws, and not allowing a sufficient air-space at the back of the houses, also a breach of the bye-laws. He was fined 15*l.* and costs in three cases, 5*l.* in each case.

PROPOSED NEW BUILDINGS IN EDINBURGH.

EDINBURGH has long been famous for its medical schools. The progressive increase in the number of students, and the additional requirements of the age have, as we formerly made our readers aware, necessitated the erection of new medical class-rooms for the University, which are to be carried out on an extensive scale at an expense of about 200,000*l.*

This proceeding of the University authorities seems to have stirred up the extra-mural teachers to greater exertion. They have hitherto been content with any accommodation which could conveniently be obtained, but a new enterprise is to be entered upon, and medical class-rooms, having the necessary modern requirements, are about to be erected, at a cost of 10,000*l.* A site has been secured for the new buildings from the City Improvement Trust, immediately to the west of the new Free Tron Church, in Chambers-street, and plans have been prepared by Mr. R. L. Henderson, architect, which await the approval of the Trust.

The design prepared by Mr. Henderson is in style and general effect nearly identical with that prepared by Mr. Cousin, the architect for the Trust. At the east end of the elevation there is a pavilion 20 ft. square, and 60 ft. high, which will balance the pavilion which forms the south-east portion of the Free Tron Church, which latter pavilion was insisted upon as an essential feature in the architecture of the street. In the pavilion, which is to consist of three stories and an attic, is to be placed the principal entrance, having a porch composed of two columns with carved capitals supporting a semicircular pediment. The remainder of the building to the west is to consist of two stories and an attic, and in the centre there is to be another doorway with a moulded entablature. The windows on the first floors are to be arched, and those above form a range of large dormers similar to those of the School of Arts, between which and the building we are describing there is to be formed a semicircular screen wall to shut out some unsightly buildings which partially obtrude upon the back line of street, and render that portion too narrow for building purposes.

The interior contains in the basement a house for the janitor, the heating apparatus, and a room for analysing gas. On the ground-floor there will be two lecture-rooms, seated for about 300 students, two museums, and other rooms at the rear, lighted from the roof; also a pathological and physiological library.

The first floor is to be devoted to the chemical department, and will have a laboratory at the the rear, 60 ft. by 30 ft.

The anatomical department is situated on the upper floor, and will embrace a dissecting room, 60 ft. by 40 ft., lighted from the roof and three sides.

A vacant stance, to the right of the Free Tron Church, has been applied for as a site for a new normal school. Mr. David Rhind, architect, has submitted an elevation, which departs in several particulars from that prepared by Mr. Cousin, the architect for the trust. Mr. Rhind proposes giving to the west end of the block, of which the school would form a part, a more distinctive and ornate character than the remainder. This departure from the original design has been remonstrated against by some of the proprietors of the remainder of the block, and the matter is now under the consideration of the improvement trust.

As we stated in a former notice, the directors of the School of Arts have secured the vacant site to the west of that institution whereon to erect an extension. There now remains only one site in the hands of the trust to be disposed of, and if this were taken up, and the museum of science and art completed, this fine thoroughfare might be considered as finished; but we are in the hope that some not very sightly old buildings, which were unfortunately allowed to remain at its western extremity, may yield to the pressure for improvement.

Immediately to the west of the ancient Magdalene Chapel in the Cowgate, the quaint tower of which forms a conspicuous object from George IV. Bridge, a Medical Missionary Institution has been erected as a memorial of the late Dr. Livingstone, the African missionary and explorer. The designs have been prepared by Mr. Robert Raeburn, architect, in a style similar to that of the chapel, which is of Late Fifteenth Century Gothic. It contains, on the ground floor,

accommodation for a porter and a resident surgeon, and also a consulting-room; on the first floor, a lecture-room, museum, sitting-rooms, and servants' accommodation; and on the top flat are bedrooms for students. The building is erected by public subscription, at a cost, including site, of about 10,000*l.*

The picturesque tenements of old Edinburgh are rapidly disappearing, sometimes yielding to the demand for modern requirements, at others to inherent decay. Some of the most picturesque of these, situated at the head of the West Bow, have become in so dangerous a condition as to necessitate their demolition, and they are now things of the past, gone for ever. Our ancestors did not always build in the most substantial manner, as is generally supposed. Occasionally these tenements are found to be constructed of materials which would not now be used for such purposes. The stones are often small and undressed, such as are now used for building fences, and the native timber is fitted up in the roofing in the roughest manner, and seems to have been used in a green state. When brought to light it appears extraordinary that these tenements should have held together so long; but there is a wonderful tenacity in stone and lime when fairly united. The building must have been proceeded with slowly and cautiously, for if knocked up at the speed with which such erections are now constructed, the whole affair would, most probably, have collapsed like a tower of cards.

At a public meeting held on the 28th ult., it was resolved to constitute the Edinburgh Sanitary Protection Association, already mentioned in our columns, and an influential council was appointed.

THE BUSINESS OF ART IN NEW YORK.

PICTORIAL and what are here called "Art Exhibitions" follow one another so rapidly, that, if it were not for sufficient evidence to the contrary, one would be disposed to believe that the New Yorkers are especially interested in the fine arts.

How it has come about that one should be more pestered with art and artists in New York than in any other city that we know of, must be owing to the insane belief that has taken a stronghold of hundreds of otherwise useful people, that art may be followed as an exceedingly easy, pleasant, and profitable business. It is really sad to find so many young people embarking in a seriously hazardous undertaking before making some little more inquiry from competent persons how and when to exhibit the hasty products of their ingenuity. The time has certainly come, if it has not long since arrived, for the "facile settings-up" that "Aurora Leigh" so eloquently denounces, and one begins to fear that, in the short time it has taken us to grow tired of slipshod work, we are already wearied of painfully accurate commonplace transcripts, or photographically studied incidents of every-day life.

The business of art in America appears to have taken its rise very much about the same period that in England the present race of artists and critics were fascinated by Mr. Ruskin's "Modern Painters," and most of his difficult lessons have been readily accepted here, *minus* the excellent morality that he always endeavours to teach, and which, in reality, is the secret, or the key, that opens to the mind of those who read carefully a value in every word uttered or written by him,—a claim to our warmest admiration. But the business of art in America has very little to do with morality in any shape; plagiarism, gross imitation, haste, ill-conceived falsehood, in every shape, run through all that is done here, and since New York has become, or seems desirous to be thought, an "art centre," the immorality of trade and commerce seriously regarded is seen in full force, the two pursuits, that of trade and art, or fine art, being looked upon as almost rival industries.

Still, some Americans hope for the time so reasonably dreamt of by Mr. Morris, who believes that art has such sympathy with cheerful freedom, openheartedness, and reality, so much she sickens under selfishness and luxury, that she will not thus live surrounded by bad associations; as he truly says that on such terms as she now exists, he would rather that she did not live at all. There are men here, who, concerned in the business of art, again, like Mr. Morris, desire that all workmen will work more for the love of producing good things than with the love of disproportionate gain. They, like him, hope for a good time, when faith and beauty will eventually conquer a great part of the evil, and the discomfort and distastefulness of life, as it is now led, so that our streets may be made as beautiful as the woods, as elevating as the mountain-sides.

The business men concerned in the business of art in New York might well look up to Mr. Morris as a practical worker in beautiful and accurate theory; for he has combined, as most of us know, the pleasure of teaching with the profits of trade.

The business of art in New York is probably the most intolerable pursuit or vocation that the ingenuity of the arch-enemy could have devised, and the reckless manner in which the uncultured man of business enters into the wide field of fancy, possesses, from a philosophical point of view, an element of comicality not often to be met with in the sphere of philosophy or the realms of science.

It is only the few, the very few, acquainted with the history of art and the great lessons it has taught us, who are aware that a great country like America must acknowledge that, in order to arrive at distinction in any pursuit, certain elementary principles must be closely observed, which here, in matters of art, are altogether disregarded.

It was not until Italy had overcome in a measure the difficulties of ages of domestic troubles from without, that her rulers began to think of encouraging what we understand by the term "art," and at no age until this have the directors and instructors of the beautiful been left to the caprices of popular opinion, or to the altogether untaught idea of the many.

At no period of history has there been any variance of opinion on the subject of beautiful art; when doctors have disagreed, the right has always reposed with him whom time has shown to have been the best instructed or the most highly gifted, and the expert of to-day admires and esteems exactly the same art, with happily more to admire, as Pericles or the De' Medici, Arundel or Charles Stewart, down to the fastidious collector of our own day,—men who love more than ever the stupendous work of old art, and detest with hearty vigour the assumptive horrors of speculative modern work,—hate it the more because it is worse than useless, it is mischievous.

The business of art in New York is the more distressing because it is retarding a progress which in all likelihood may be alive in America, as it must be admitted to be in other parts of the world; but the progress in art, at least, if in no other affairs, is moving here at a rate so slow that the inclination towards right is little more than that divine momentum that guides in all things, while all human efforts towards an ideal are clearly erroneous.

As a business, it is surprising that Americans should have so seriously taken art into their ways of life; it almost seems to suggest that the "smart" inhabitants of New York have much of the provincial about them; that they should not have yet found out that art, successfully followed, does not admit of those ingenious combinations that the real artist in Wall-street so dexterously manipulates, a manipulation which has gained for the "down-town" artist a reputation that must be owing in a measure to the fact that most of them must be gifted with ambi-dexterity, a power among painters confined to very few,—to Velasquez, it is said, certainly to Landseer, and to some less gifted ideal workmen.

New York has no right, America has no reason, to expect to arrive at even partial distinction in art, without consulting the conditions through which other countries have obtained their pre-eminence; let there be in America at least a period when the value and importance of art is acknowledged with some show of warmth; let America go through a Renaissance, or, as this is difficult, a sincere enthusiasm for art, like that of the sixteenth century in Europe; let them have an epoch of splendid art-industry like that of the Dutch of the seventeenth century, or, if they please, a decadence of lovely effeminacy like the French art of the eighteenth century, or the Classical fad of the First Empire, or the beloved romantic school of the first quarter of this century, out of which the glories of the French art of the present day have sprung; let the Americans have all this, or something like this, before they can hope to rival or hold their own with ripe artists of Europe, who have been content, and are still contented, to live laborious and sparing lives for years before gaining the positions that excite the cupidity, rather than the emulation, of imitative speculators.

Notwithstanding that the business of art in New York, taken from the painters' and sculptors' point of view, holds forth but very meagre prospects of an ample reward, in all candour it must be admitted that much of the business of art, as shown by Harper's, and especially Scribner's Magazine for February, has led to the nearest approach to perfection that we have yet seen in any monthly illustrated publication.

The business of art in New York (we purposely confine our remarks to the "Empire city," as in Boston and elsewhere the subject is somewhat differently regarded), prominently as it appears to occupy a decided position, and notwithstanding the large capital that must be embarked in manufacturing popularity, must still have but doubtful hold on the affections or regard of the people; as a business out of which capital may be made, like the dry-goods business, speculative building, or cleaning the streets, it possesses a certain vitality, that in some degree connects it with other legitimate pursuits, but unless in the shape of monumental work, public statues, or fountains, the business of art is considered deficient in those attractive elements that seem to endear the more plastic traditionary arts of trade and commerce. Still, the business of art has not yet been carried out in New York to the perfection that it has arrived at in other great cities of the world, and there are here no professors or disseminators of art who are spoken of as millionaires, although many of them are fully qualified for a place in Congress, where they would doubtless carry a grace beyond the ordinary reach of their pursuit.

The business of art in New York is certainly not hampered by any legislative restrictions or State conservatism; the art societies here are "strictly private and confidential," taking on themselves all control and responsibility, and pocketing the doubtful profit and securing the uncertain credit attached to their exertions.

As a rule, however, the true business of art is carried on at a distance from New York, and the faithful American artist is to be met with, working well and quietly by the side of other artists, in Paris, in London, in Rome, and in Florence, from which centres they send forth to the world works that have at least an equal chance with other modern productions of becoming immortal.

> "While the manners, while the arts,
> That mould a nation's soul
> Still cling around our hearts,
> Between let ocean roll,
> Our joint communion breaking with the sun,
>
> Yet still from either beach
> The voice of blood shall reach
> More audible than speech,
> 'We are one!'" *

New York.

CLASSICAL ARCHITECTURE.

AT the meeting of the Society of Antiquaries, held on Thursday evening, the 28th ult., Mr. Edwin Freshfield, F.S.A., read a paper "On Certain Byzantine Adaptations of Classical Architecture."

His object, he said, was to draw attention to the effect of Byzantine influence, if he could call it by that name, in the Eastern Empire upon the architecture which up to that time had been prevalent throughout the whole of the Roman Empire. It had always seemed to him that the first purely Byzantine emperor was Justinian, whose reign was the starting-point of a new order of things; it was to him they were indebted for the code of laws which to this day had so important an influence upon the world, viz., the Civil Law. It was in his reign that the style of architecture which they called Byzantine originated and even culminated, because he (the lecturer) supposed that the finest developments of the style were the Churches of St. Sofia and of the Apostles. It was only certain architectural features that he proposed to consider. The particular feature was the effect of the Byzantine influence upon the capitals of the pillars of certain churches built in this reign. It was hardly necessary to say that of all architectural details, no class was more attractive than that of the capitals of pillars. Indeed, it might be said that in the Classic styles the capitals formed the distinguishing mark, and that the Doric, Ionic, Corin-

* Washington Allston.

thian, and Composite styles of architecture were better known by their capitals than by any other detail. Almost the only strictly architectural detail that they knew of, the Temple of Solomon at Jerusalem, was that Hiram, the widow's son of Napthali, ornamented the capitals of the pillars with network, lily work, and pomegranates. The same thing was seen in the Mediæval architecture of this and every other country, for he supposed by no other method could they so readily distinguish the date of a building and the style to which it belonged. The principal architectural buildings of the time of Justinian now remaining were the Church of St. John of Ephesus, the churches of the Lesser and Greater St. Sofia, the Church of the Monetes Choras, and perhaps the Church of St. Andrew, at Constantinople; a group of churches at Ravenna, of which St. Vitale was the principal; and the churches of St. Demetrius and St. Sofia at Salonica, the oldest being the Lesser Sofia.

The form of capital to which he proposed to draw their attention would be illustrated by several different examples. In all capitals of the Classical styles in which the acanthus was used as an ornament, the leaf clings to the capital with the stem, and then falls over the top. Somewhere about the age of Justinian the Byzantine architects modified this, and adopted a form of capital which differed both in shape and ornament from all Classical designs. In it the acanthus-leaf was greatly modified, and no longer falls; it clings to the capital, clasping it, and does not fall over it at all. He had called the leaf an acanthus, because they were accustomed to call it by that name. He did not think it was the leaf of the plant they called the acanthus. The capitals themselves also began to assume unwonted shapes, but it was more to the ornament than to the shape that he wished to call attention. It seemed to him that until the middle of the fifth century the falling leaf was used all over the East, and, indeed, perhaps later than this; but it was abandoned in the reign of the Emperor Justinian.

The last building of any note that they had in Constantinople before the age of Justinian was the Church of St. John of the Studium. In Sallzenbury's book there was a picture showing the falling leaf, and it was very much of a Classical type, the building being the last Classical one in Constantinople. Sallzenbury gave the details of two capitals from the Women's Gallery, as being there in his time, in which the leaf does not fall. Eighteen months ago, when he (the lecturer) went to Constantinople, he visited the church to look for the capitals, but did not find them. All the ruined capitals lying about had the falling acanthus-leaf. The capitals in the Church of Sergius and Bacchus were very peculiar; in them the falling leaf had disappeared altogether. The ornament was still a leaf, but the leaf had quite lost its distinctive acanthus character. There was no gradual change, but the architect had at once plunged into a style of decoration unlike anything the Classical world had seen before. The Christians had imitated their Pagan ancestors long enough, and were now going to strike out a new line for themselves. He had often tried to trace the shape of these capitals back to some Classical source, but without success.

Of the same age as the Lesser St. Sofia was the Church of St. Vitale at Ravenna, the capital of which was not of such delicate execution as its counterpart in the Lesser St. Sofia; still, the similarity was too striking to be casual. The capital had upon it the same sort of abacus as was seen in the upper story of the church of the Lesser St. Sofia,—very plain, except that upon the face of it there was a Byzantine monogram. In Ravenna, the churches immediately preceding St. Vitale in date,—viz., the Church of St. Apolonare at Classein and St. Apolonare Novo,—both had capitals with the falling leaf. As regarded the great Sofia at Constantinople, although the form was somewhat different, there was the same clinging leaf, and the falling leaf did not occur at all. There was a remarkable capital in one of the side chapels which might be compared with a very similar capital in St. Demetrius at Salonica. The capitals of the pillars showed some similarity to those in the upper story in the Lesser St. Sofia. In the Salonica church of Demetrius some of the capitals had the falling leaf and some the clinging leaf. In the capital which belonged to the Church of St. John, built by Justinian, the clinging form of the leaf was very well seen, and it might well be compared with the capital upon which it stood, which had a falling leaf. The plan of the church was the same as that of the imperial mausoleum, the Church of the Apostles. That the clinging leaf was in use in other churches in Asia he knew; because, once being at a village almost halfway between Lake Mermerah and Thyatyra, he found one there, and would have brought it home if he could have found a conveyance. At St. Sofia at Padua he found some capitals, which, though of different shape, they both carried out the idea of the clinging leaf, and resembled the Ephesian rather than the Byzantine form. So far as he knew, it was the only church dedicated to "the Divine wisdom" in any Latin place, and the very name showed that the dedication must have taken place during the time that the Greek influence prevailed there. The town of Padua was destroyed by Attila in the year 452; shortly after this time it was rebuilt, and about the year 600 it was taken by the Lombards and again burnt. One naturally looked round to see where this clinging leaf could have come from as seen in the examples of the great St. Sofia at Ephesus and at Padua; he could not say that there was not some trace to be found in earlier buildings that some such changes were coming. But nothing of the kind of thing seen in St. Vitale and the Lesser Sofia had he seen anywhere else. He thought up to this time he had shown that whatever alterations in the style might have been produced by it, it originated and developed in Constantinople, and that where it was found outside it was due to Byzantine influence. In this respect he differed from Mr. Fergusson, who would lead to the impression that the classical feeling was retained in the capital rather than in the provinces. Now, the result of his (Mr. Freshfield's) investigation would lead him to a contrary impression. If the larger capital from St. John's at Ephesus belonged to the Church of St. Justinian, it would appear that the Classic and new style had had a struggle for it, not altogether in favour of the new style. But if they would turn to the imperial city of Antioch, they would find this was still more the case.

There was a large and important group of churches in Syria within a short distance of the City of Antioch. Up to the date of Justinian, and even after that time, Antioch held one of the first places in the empire, and it was to Antioch that the East was indebted for its Liturgies. The principal group of these churches was in the neighbourhood of the monastery of the Church of St. Simeon Stylites. This church and the neighbouring churches had been drawn by the Count de Vogüé, and in the book they searched in vain for a capital with a clinging leaf. The exact date of the building could not, of course, be ascertained. St. Simeon Stylites died between the years 460 and 470, and the church certainly was not built during the lifetime of St. Simeon himself. He (Mr. Freshfield) should think it was impossible to find any more unclassical design for a building than this church, and Pocock correctly described it as being of the shape of a Greek cross, with a magnificent central octagon, but the designs were strictly Classic, and particularly that which they had been considering, viz., the capitals of the pillars; and in no instance was there a capital in any way approaching those they had seen in Constantinople. The particular style of capital to which he had referred seemed to have originated in Constantinople or the neighbourhood, and to have extended into Asia Minor, on the one hand, and to Salonica and the coast of Italy on the other. It was perfectly manifest that the architect of the Lesser and Greater Sofia were one and the same,—Anthemius of Tralles. He also built the Church of the Apostles at Constantinople, and the Church of St. John at Ephesus; and it was to him that they were indebted for this rapid change from Classical to Byzantine architecture in design and details. Once freed from the Classical style it was wonderful how the Byzantine architects improved on the idea. The Church of St. Vitale alone showed three different varieties, and the capitals deserved very careful study, showing a marked difference from any to be found in Constantinople. It was impossible to say that the acanthus was not there in some form, but it had grown now more into the shape of tracery. By a curious coincidence they would see that whereas in the upper story of the lesser St. Sofia the capitals remained more Classic than in the lower, in the upper story of St. Vitale the capitals still retained the falling leaf, while in the lower portion of the building there was not a trace of Classic feeling to be seen. As they would see, the form of the capitals was that of Justinian, but in the details the designer had wandered away almost entirely from the acanthus-leaf. At a later period, the ornament in low relief went through all sorts of variations, and both in the East and West it might be seen in many forms. The history of the effects of the successive waves of the Crusades on Western architecture had yet to be written. At present they had almost contented themselves with the knowledge that they imported by means of them, rosaries, the leprosy, and some few circular churches; but some day they would recognise the low relief capitals of St. Sofia, with the clinging leaf and the Classical drooping leaf, as being both represented in the Norman and Early English churches.

NOTES ON JAPANESE ARCHITECTURE.*

THE Japanese seem greatly to seek privacy, for their houses, even when they are placed in country districts, [are mostly fenced in. They sometimes have an open loggia to the upper floor, as in the hotels, from which they can enjoy the surrounding [view, but the approach to the house is invariably shut in, and the lower story hidden by high railings of bamboo. In houses of one story this fence often reaches as high as the eaves of the roof. The Yashikis are shut in in a similar manner, perhaps with a view to protection from treachery as well as the love of privacy. Not only are the whole grounds surrounded by a high wall on three sides, with a long range of buildings and strong gateway on the entrance side, but there is often a high wall or fence close up to the front of the house, through which the open portico projects. Between this and the outer gateway, with its range of buildings, there is a paved court, on the two sides of which servants' quarters, stables, and other outbuildings are situated. From the street the outer gate and its surrounding buildings present in many cases a very pleasing façade. The long horizontal lines of ridge and eaves, as well as the horizontal effect obtained by the lower story being constructed differently from the upper, is relieved by the vertical window bars and projecting bay windows on each side of the large recessed wooden gateway. The gateway itself is of very solid and strong appearance; thick posts, carrying heavy wooden lintels, which support the upper story over the gateway, form the framework of the heavy doors. Both the posts, lintels, and doors are lavishly shoed, belted, and adorned with plates of engraved and gilt bronze. There is in some of these a low mass of buildings, marking the approach to a Daimio's dwelling, a simple grandeur of line of proportion and balance of parts, reminding one as much of the repose and beauty of Greek architecture, as the Japanese decorative ornament in many of its forms, and in the beauty of its execution, reminds one of Grecian art. The walls are generally placed upon a base formed of two or three courses of stone. The lower story, instead of being plastered upon the outside, is sometimes covered with large tiles placed square or diagonally. They do not overlap, but are fixed to the laths, side by side, the joint being protected by a large roll of cement. The tiles being dark grey and the cement white, this treatment presents a somewhat curious, bold, chequered appearance. Placed symmetrically on either side of the gate are often two square projections, about 9 ft. by 6 ft., of one story, with an ornamental curved roof and carved gable. They correspond to our bay-windows, and command a side view of the gate, for porters or a guard who occupied these rooms. These projections have also a stone base, and are framed about 4 ft. from the ground, with window-bars and transomes placed very close together. They are protected when necessary by sliding shutters from within. Such windows also sometimes occur at the ends or the centre of the range of buildings on either side of the gateway. The other windows are either oblong openings, with thick wooden bars, or they are small projecting windows, framed out some few feet above the ground, and supported on carved or moulded wooden brackets at each end. This framework is sometimes perfectly open at the bottom, the whole front and sides being filled with close bars, and the top covered by a small curved lean-to roof. The

* See p. 238, *ante*.

inside is protected by sliding shutters flush with the inside of the wall of the room. In some Yashikis in Yeddo these projecting window openings are continuous, running nearly the whole length of the building, with brackets at intervals. The whole of the exposed woodwork (gate-posts, lintels, and windows) is often lacquered in black or a dull red colour.

The smaller and inferior Yashikis are often of one story only, and instead of being plastered or tiled, are frequently boarded with planks nailed on to the wooden framework, slightly overlapping at the lower edge to carry off wet. The whole is stained a dull black colour. The outer walls, referred to as being placed round dwellings of this class, are either fences made of strong wooden posts and beams, covered with planking and protected by a little tile roof supported upon brackets at the top; or they are of considerable thickness, constructed in alternate layers of tiles and cement, the cement being as thick in its layers as the tiles. The top is protected from wet and decay by a little projecting tile roof with ridge tiles and ornaments, similar to the roofs of small buildings. There are no instances of the walls of dwellings themselves being constructed in this way with tiles and cement. At the back of the dwelling within the surrounding walls are large grounds, generally laid out very prettily as a landscape garden. These Japanese gardens abound in grassy mounds and terraces, planted with an endless variety of trees and shrubs fantastically trained, with groups of large stone slabs and boulders, running streams, small lakes, fancy bridges, and stone lanterns.

The palaces of the Emperors appear to have been a collection of a number of detached buildings of the class just described, surrounded by a wall of great circuit with a number of entrance gateways. A Japanese book, which refers slightly to the subject of architecture, says :—

"Jimmu Tenno, the first emperor of the present dynasty in Japan, lived in Kashiwara no Miya, in Yamato, which was the first building of the kind called Miya in Japan. It is related in a book that, seven years after the ascent to the throne of Suiko Tenno, Siyotoku Tyshi proposed to build a Miya of a fixed size and arrangement, as the former Miyas were of different sizes. This was to be 365 ho, square (730 yards square), and to consist of 28 good *detached* limoki [name of wood] buildings, with the *bark of the tree used for the roofs*. Of these buildings, the 2 th was to be for worship, and the rest for the affairs of government. One large building must have been in the same style as Hinosho-Ku [in China], having ornamental pillars and ceilings. O. Haruta no Miya was built according to this rule and arrangement. In the twelfth year of Yenriyaku a new Miya was built by Kuwan-Jun Tenno, in Yamashiro, and in the tenth month of the following year he removed from the south to the new Miya, the latter place being the present Kioto."

The name given to these large Miyas seems to have been Dairi or Dai Nairi, meaning imperial residence, as the writer goes on to say,—

"The complete plan of this Dai Nairi measured 36 cho. [4,32 yards] from north to south, and 20 cho. [2,400 yards] from west to east. It had the same arrangement as the Palace of Kanya-ku, in China, having twelve gates in its circuit. About 160 years after this Dai Nairi was built, it was burnt down, and since that it has been rebuilt several times. After the Shoguns came into power, a small Dairi was built instead of it."

From a very rough print accompanying this description, supposed to represent the plan of the palace, each building being shown with four lines, it appears that the dwellings were arranged in a somewhat uniform manner, so that the whole group occupied a rectangular space. The buildings were separated by a number of wide walks crossing at right angles and leading to the numerous gateways in the boundary wall. The principal gates seem to be on the small sides, or what may be called the ends of the group, and on the centre or axis the principal buildings stand. On entering the centre gate, at one end there is an open court and then other gateways before reaching the first large collection of buildings.

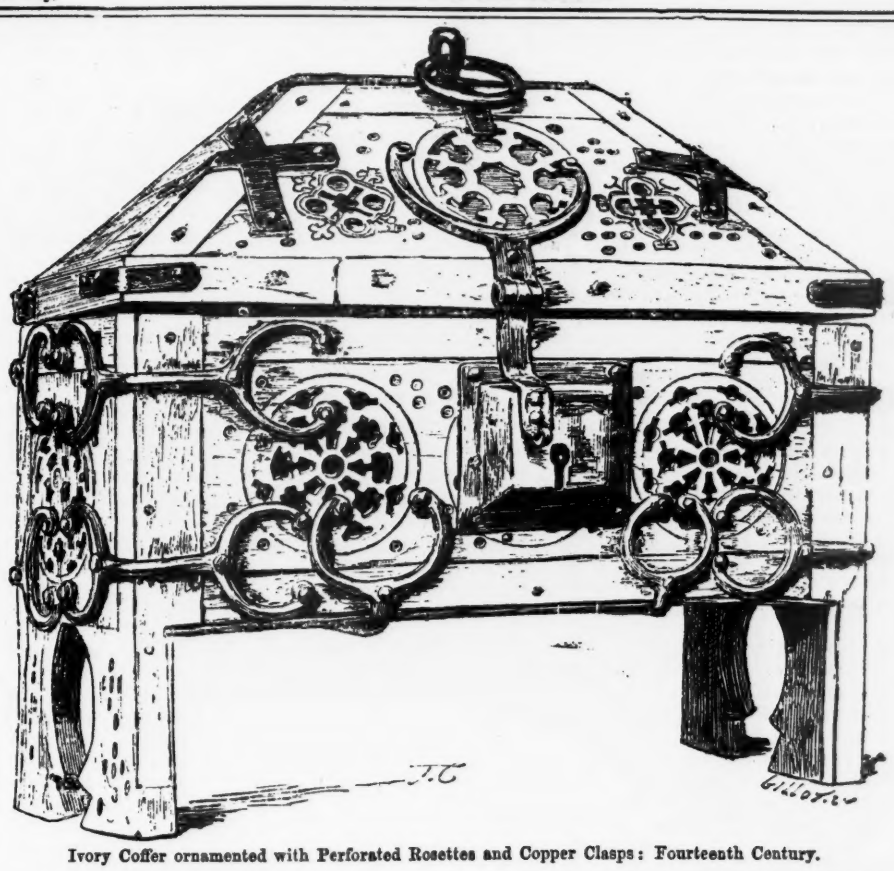
The military architecture of Japan seems not to have been much more substantial than the rest, though many cities contain large moats and the stone walls within which the castle buildings stood. The central portion of the city of Tokio is surrounded several times spirally by a deeply-cut moat with large grassy slopes. Towards the centre, this spiral forms a complete enclosure, and on the inside of this inner moat is a thick stone wall constructed in large polygonal blocks, which originally carried wooden defensive constructions surrounding the castle within. The larger number of these wooden constructions were pulled down some years ago, but those few that remain form, with the solid walls, deep moats, and strong gateways, an extremely picturesque feature of the city. Comparing these remains with a rough plan of a castle taken from a Japanese book, it appears that there were in the centre enclosure of these fortresses three principal buildings of a tower-like form. The most important and the highest of the three, called Homaru, was immediately under the chief in command, and for the use of him and his retainers; the second, which was somewhat lower, called Ninomaru, was devoted to the use of the second in command; and the third, lower still, to the third in command. This last was called "Sannonaru." These buildings were of two, three, or four stories, placed upon a solid battering stone basement similar in construction to the surrounding walls. Each story is set a little back within the lower, the projecting portion below being covered with a very salient roof adorned in some instances by little excrescent roofs presenting richly-carved gables. The top roof, which is generally hipped, is slightly concave, and has a very bold projection. The towers are often oblong in plan, and then the ridge of the roof ends in a small gable terminating in a hipped roof. These crowning roofs also carry little dormer gables, apparently used neither for light nor ventilation, but as ornament: they are generally little roofs of a curved form. In addition to these dormers the ridge and hip tiles are richly adorned with finials at the extremities, the ridge often terminating in a large representation of a dragon or fish with the tail curled upwards, executed in copper. The walls are thicker than those of ordinary houses, but are constructed of wood filled in with mud and plastered over, showing only the wooden window-frames, which are filled in with thick wooden bars set closely together.

Close to these three central towers is a cemetery for the dead, with a little temple enclosed. There are also within the castle wall six or more large yashikis, being the dwellings of the chief samurai, or officers of importance, and their retainers. In addition, a large mound commanding an outlook and several small Shintoo temples, the principal one being dedicated to Haceman, the god of war. The outside wall, constructed in large polygonal blocks of stone and backed with earth, is interrupted at intervals by large gateway constructions. The ponderous wooden gates are hung to heavy square posts with thick lintels above. These gate-posts, some 18 in. square, often in pairs, are shoed and belted with bronze plates, mostly gilt and engraved. The gates, too, are generally adorned with metal fittings. The approach is by a permanent wooden bridge erected over the moat. Upon the surrounding wall, built out for the purpose so as to flank those who enter the gateways, are erected towers similar to the interior keeps, though somewhat smaller; and also at all angles of the wall are two-storied towers. Between these buildings and the gateways a low building or shed covers the whole top of the wall, taking the place of the hoarding to our Mediæval battlements.

The temples of Japan are by far the most interesting and instructive buildings to be found in the country; set in the solemn shady quiet of their thick groves, approached by their avenues of lamps, both stone and bronze; with the grand sweeping lines of the roofs projecting boldly forward, upheld by a profusion of brackets; wooden carving tastefully disposed, sharply and beautifully cut, and the whole woodwork often decorated in well-harmonised colours with gilding and bronze ornaments. The principal temples are to be found in Nikko, Osaka, Kioto, and Tokio (or Yedo). The two principal groups of temples in Yedo are at Uyeno and at Shiba, and at both these places the large central temple has been destroyed by fire. The subsidiary temples, however, are so numerous and imposing that these sites still rank first in importance in the city as temple groups. But the Uyeno and Shiba temples may be said to have belonged to the late Shoguns. It was under their direction that they were built, and that the vast sum required for their erection was provided. Here were erected their shrines and the oratories attached to them, which are now the most splendid and attractive buildings to be seen, loaded with the richest profusion of decorative art. The shrines of the 1st and 3rd Shogun, both eminently illustrious in Japanese history, are at Nikko. Those of the 2nd, 6th, 7th, 9th, 12th, and 14th at Shiba, in Yedo, and the others at Uyeno.

The temples at Shiba are enclosed on three sides by a long wall with several gateways at intervals, and backed by a thick wood of fine old trees. The streets surrounding the walled sides consist of a continuous avenue of pine-trees, interrupted only by one large and two small gateways forming the approach to the sacred grounds. The principal entrance is a large and imposing wooden structure some 70 ft. wide and of about the same height. It is built upon heavy wooden pillars arranged so as to form one principal opening and two side ones, these wooden posts being tied together by horizontal beams tenoned to the posts, the sides of the entrances being filled in between this framework with panels of wood. Half way up, above the soffit of the entrance, which is formed of heavy beams, a tiled roof, slightly concave, projects forward and exhibits the ends and underside of numbers of rafters supported upon corbelled brackets. Above this roof the upper story is set a little back, and is surrounded by an open balustrade. This upper story is constructed of wide posts and horizontal beams, with wooden filling in, crowned with a cornice of wooden corbels assisting to support the double rafters of the roof. This roof has the heavy appearance, the concave contour, and the semi-gabled form at the ends which is peculiar to all Buddhist temples in the country. After looking at other religious buildings, where every part is painted, carved, or gilt, this gateway might be considered somewhat plain, as it has no carving, and is coloured with one uniform dull red colour; but it has more claim to grandeur of proportion and general effect than any other building which I have yet seen in Japan; its great size, good proportion, picturesque roof with ornamental crestings; also the numberless corbels, brackets, and rafters, some moulded at the ends so as to suggest the frowning face of a monster; also the deep red colour, bright where the sun strikes it and subdued in parts by the tree-shadows and the sharp deep shadows of its cornices and roofs;—all these help to fill the beholder with the liveliest feelings of satisfaction. Passing through this portal, we find ourselves in a large open space some 200 ft. square, in the centre of which the large temple stood, now burnt to the ground. Across this space, nearly opposite to the great gateway, is a little temple approached by steps leading to a paved ante-court containing a few tombs and an image of Daibutz in bronze. This ante-court is defended towards the entrance by a screen and low gateway. The most noteworthy buildings, however, are on the right-hand side of the open space just referred to. These buildings consist of the shrines of the 2nd, 6th. 12th, and 14th Shoguns and those of their wives, with the religious buildings attached. They were originally approached by two other gates, at some distance to the side of the great gateway, which belongs to the large temple now destroyed, but these small gateways are now closed. They are very similar, and it will be sufficient to describe one. The entrance forms the centre of three compartments divided by wooden pillars and connecting beams; the two side compartments form recesses for large wooden figures considerably larger than life, and indicative of exaggerated muscular strength and extreme hideousness. The face of one is painted bright red, and the other a livid green; the posts, wooden panels, and gates are carved and coloured in red, black, and gold, with diapers in colours in some parts. The name given to the gate is Nio Mon (Mon-gate), Nio being the name of the hideous janitor who is supposed to guard the entrance to Buddhist sanctities, and whose representation is placed in carving on each side of these gateways. Within the Nio Mon an open space or court is passed, containing several rows of stone lamps, being large stone lanterns placed upon circular pillars with heavy bases, moulded and carved, in all about 5 ft. or 6 ft. high. These were gifts from the smaller Daimios, being offerings to the Shoguns' shrines. Before some shrines there are long avenues of them, increasing in importance as they approach the temple. This court is enclosed by an ornamental screen fence, in which another richly-decorated gateway, with heavy folding-doors, leads to another court surrounded on three sides by a wooden screen wall, carved and painted, and protected by a tile roof.

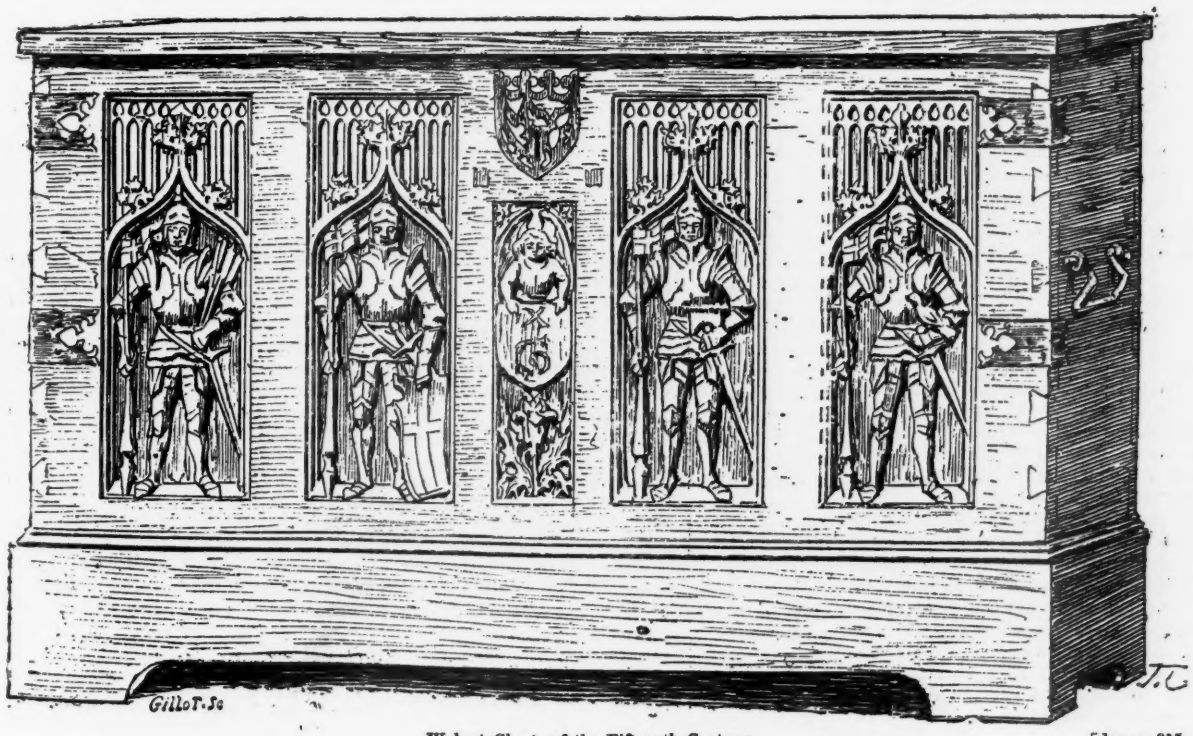
At Uyeno, in the north of the city, there are the Haidens and shrines of the 4th, 5th, 8th, 10th, 11th, and 13th Shoguns, being grouped in threes, having one haiden to each three, viz., 5th, 8th, and 13th, and the 4th, 10th, and 11th. The arrangement is exactly similar to that of Shiba, but the stone and bronze lanterns are more numerous; the forms of the roofs, and details of carving and mode of colouring, are rather different. Black is much used in the decoration



Ivory Coffer ornamented with Perforated Rosettes and Copper Clasps: Fourteenth Century.

Ornament taken from the Bible of Louvigny.

Japanese Porcelain Plate ornamented with the Symbolic Crane.



Walnut Chest, of the Fifteenth Century.

[See p. 255.

of these buildings at Uyeno. The other gates are entirely black, with gilt and bronze ornaments, having the peculiarity of a roof covered with small wood shingle instead of tiles. Black is also much used in the decoration of the Haidens, which are otherwise richly coloured, as at Shiba. The shrines of the 4th and 5th Shoguns are of bronze, with their railings, gates, and bas-reliefs; the bronze has a dull, greenish colour, approaching to black. Though the arrangements and general mode of construction of these sacred buildings are so similar that to describe each involves much repetition, yet there is such a variety of details—such different treatment in points of decoration, both carving and colouring,—that there is in them an endless study for the artist.

The carving is generally cut in camphor-wood, and the colour is mixed with a kind of size which seems effectually to resist the action of the weather. The posts, beams, and all large surfaces decorated in one colour are coloured with the medium of lacquer, which is either left of a dead colour, or is polished to a great degree of brightness. The bronze shoes and other ornaments are deeply engraved, and filled in with black in the hollows.

The Japanese sculptors divide carving into three kinds—shallow, deep, and pierced. In the earlier work, such as the bronze tombs and gates of the earlier Shoguns, the relief is very shallow,—at the same time very sharp and effective. In the later work, nearly all carving upon the outside—such as in screens, gateways, and cloisters—is pierced in parts, being cut in a thick slab of wood, and can be viewed from either side.

A striking thing in sculpture of this kind is the extremely careful imitation of nature, leaves and flowers being carved with a delicacy and truth to nature that is marvellous, and coloured with the same care and beauty. Fruit is gilt, with red dashes of colour showing the ripeness; and the greens in colouring the foliage are varied in their tone. Fore-shortening is frequent and well rendered; and though the Japanese artist does not seem to have understood the principles of perspective, which are often violated when dealing with representations of buildings and rectilinear forms, the perspective of all natural forms is carefully noticed and imitated. In Japanese theatre scenery, I have also seen interiors of buildings represented correctly in perspective.

The third kind of carving—the deep carving,—occurs mostly in the interiors of buildings, when depth of effect is required, but at the same time no communication with the outer air, which would be obtained if pierced carving were used. Beams and posts are often diapered with shallow incised carving, the key pattern being a very favourite one, sometimes with the stem and leaves of a plant intertwining. Posts are round, round and reeded, square, or square with the corner slightly rounded or moulded. They are rounded inwards, and shoed with bronze, both top and bottom, and often a flat bell-shaped capital (similar somewhat to the Egyptian capital called "bell-shaped" by Mr. Fergusson, but flatter still), often resting on a stone base of similar form at the bottom. The projections of inter-penetrating beams are curled upwards and moulded, or are carved in the form of the fore parts of lions, elephants, or some animal real or imaginary.

New River Company's Charges.—The New River Company have raised an important question under the last Act relating to metropolitan asssessment. The last valuation was made in 1875, and was supposed to be in operation five years, but the Vestry of St. Mary's, Islington, claimed to increase the assessment, on the ground that during the two years subsequently to that rating the company increased its rental, owing to a large number of new houses being connected with its mains. The company resisted the demand, and the Court of General Assessment Sessions upheld their appeal, but it was agreed between the parties that a case should be stated for the opinion of a superior court. This will be looked forward to with interest, not alone in Islington, but also in the City, where (as our readers are too well aware) there have been loud complaints. As an illustration of the uncertainty with regard to charges, it may be mentioned that *there are builders who use the company's water by meter who are variously charged* 1*s.*, 1*s.* 6*d.*, *and* 2*s. per* 1,000 *gallons.*—*City Press.*

RUMOURS.

GOVERNMENT OFFICES AND METROPOLIS IMPROVEMENTS.

WE referred lately to the fact that the Government had relinquished an obscurely-formed intention of purchasing the site of Messrs. Drummonds' bank, and of erecting blocks of public offices between the Horse Guards and Trafalgar-square in accordance with Mr. Mitford's, or, perhaps, more correctly, in accordance with a plan prepared by Lieut.-Colonel Clarke in the years 1865-6. It may possibly be remembered that we gave in August of last year the complete STORY OF THE GOVERNMENT OFFICES, and we sketched the various schemes for continuing the erection of the many public buildings still required to house scattered officials of the Admiralty and the War Office, and other still houseless departments. The schemes submitted to the latest Select Parliamentary Committee were respectively the work of Sir Henry Hunt, Mr. Mitford, and Mr. Cates. From information that reaches us, Sir Henry's suggestion to purchase all the land not yet the property of the Government, between Parliament-street, Charles-street, the Park, and Great George-street, will soon be, to all intents and purposes, accepted. At the present moment quiet purchases are being made in the neighbourhood of Great George-street and Parliament-street. This will astonish no one who remembers how one plot of land and the buildings upon it,—in Parliament-street,—were quietly acquired some time ago, and how the consent of the House of Commons was asked after the purchase was made. We allude to the house occupied by the Messrs. Trollope. Of course the Government agents are quite wise in keeping their doings as secret as possible, but does her Majesty's Board of Works know exactly what is to be done with the land when the members of Parliament may have consented to pay the bill for purchases accomplished without their knowledge? Our own opinion upon the manner in which these purchases have been made during the last twenty years by Government agents was very clearly expressed last August. We said:—

"In the autumn of 1855, Sir James Pennethorne made estimates, and went through the necessary preliminaries, for acquiring all the land situated between the Treasury Buildings, the Park, Great George-street, and Parliament-street. From statistics which we remember having seen at the time, and from facts only recently presented to us, we confidently believe the whole of that land might *then* have been acquired for State purposes at a cost of less than 500,000*l.* That is to say, all the land upon which the new block of four public offices now stands, *as well as the adjoining land which Sir Henry Hunt now proposes to purchase for* 1,300,000*l.*, might in 1855 have been purchased for less than half a million of money."

Our object in calling renewed attention to the above passage is to prevent further "tinkering" in the vexed matter of land for Government offices. The acquirement by the State of one little plot of land, or of one little house, increases indirectly the value of the adjoining house or the adjoining plot. We repeat, let everything be done openly; and let the country know what is to be built upon that site for which it will eventually be called upon to pay more than a million of pounds.

Another rumour, which has privately circulated during the last week, refers to the difficulty experienced by the Metropolitan Board of Works in satisfying the exorbitant demands of the Home Office (in relation to Mr. Cross's Act—the never-yet-tried Artisans' Dwellings Act), and in protecting the interests of metropolitan ratepayers. It is contemplated, if not proposed, to shelve the Metropolis Streets Improvements Act for three years. Our only consolation for this loss of time and waste of money lies in the hope that meanwhile a complete scheme for the improved communications of Central London may be prepared and submitted to public criticism—a scheme of improvement pure and simple, in which the Capital will show itself as far above the affectation of petty economy as the Legislature will rise superior to the traditional obstructiveness of a few privileged landowners.

THE CHURCH OF ST. MARY MATFELON, WHITECHAPEL.

THE building we illustrate in our present number is situated in Whitechapel High-street, and takes the place of an older building, the White Chapel, which probably gave the district its present name. The derivation of the title Matfelon is so doubtful that it is not worth while to discuss it here.*

The foundations of the church go to a considerable depth, the site proving to be unsafe until a level of some 20 ft. below the ground was reached. The new church seats about 1,300 worshippers.

The tower is brought forward towards the road, and is a very noticeable feature from Aldgate. The spire, from constructional reasons, is to be added hereafter; but the lower or square portion is carried up. The total height of tower and spire, when completed, will be nearly 200 ft. Through it is entered the nave, which is 109 ft. long by 33 ft. wide, and has aisles 13½ ft. wide, north and south, all being internal dimensions. The height of nave from floor to ridge of roof is 80 ft. At the western end is a baptistery, arcaded in brick and stone, the arcades giving support to a western gallery. The light to the nave is afforded mainly by a clearstory, which is carried on five bold arches, springing from cylindrical columns of Portland stone.

The nave roof is wagon-headed, close boarded for acoustical reasons. The nave and aisles are paved with solid wood blocks, bedded on concrete. The benches are of a simple character, in varnished deal; the passages are paved with black and white tiles in various patterns. Bold carved corbels project from the capitals of the columns of the nave arcades, representing the heads of the twelve apostles, and from these spring the stone shafts supporting the roof principals.

The chancel is 37 ft. long by 27 ft. wide, and is 68 ft. high from the floor to the ridge of the roof; the chancel roof is treated similarly to that of the nave. The eastern end is apsidal, and contains thirteen windows of lancet treatment. These windows are 30 ft. from the floor, thus giving a large area of wall, for which has been designed a system of mural decoration. Accommodation is given in the chancel for the choir and clergy, the stalls being of oak. The organ projects into the nave. The pulpit and lectern are of alabaster. The font is of Caen stone. The reredos, to be erected at some future time, has been approved by the Bishop.

In addition to the usual vestry accommodation, a church room, capable of holding 100 people, is at the south side of the chancel.

The material employed has been, for the most part, red brick; the walls, both internally and externally, being faced with this. The dressings are of stone, Doulting externally and Bath internally. The style is Thirteenth-century Gothic.

An old feature is revived in connexion with this building, by the introduction of an external pulpit. This occupies an angle of the building at the western end, and was used with great success during the last year throughout the summer and autumn months.

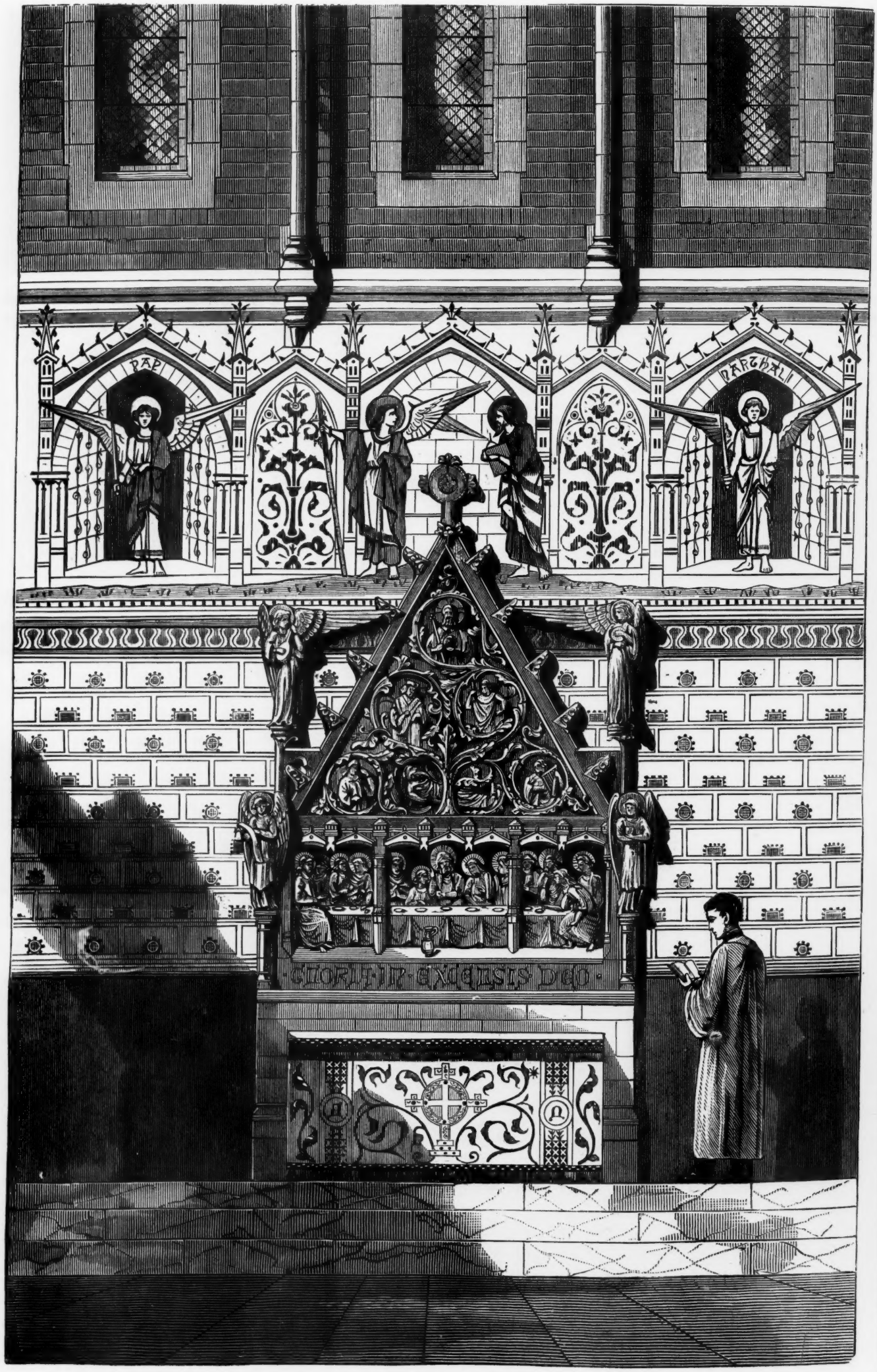
The windows will, it is hoped, be some day filled with stained glass. Nine are already fixed. Most of them are private gifts to the church, as also are the font, pulpit, lectern, altar-cloth, &c.

The stained-glass windows are from the designs of Mr. H. W. Lonsdale, and are executed by Messrs. Saunders & Co.

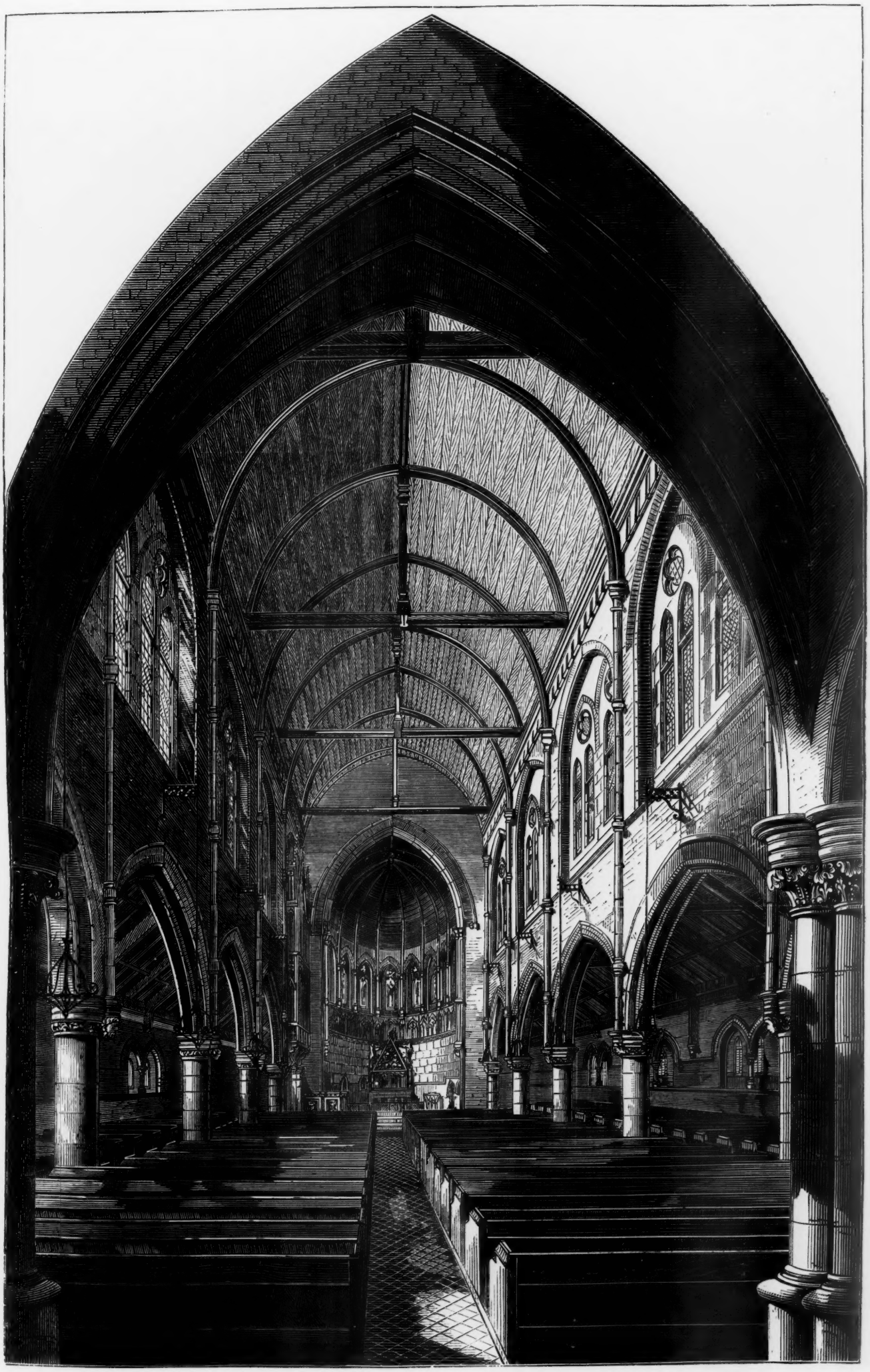
The warming apparatus was invented by Mr. George Jennings, who has presented the apparatus. The carving has been executed by Mr. Thomas Earp, except the lectern, which is by Mr. Seale. The mosaic pavement is by Messrs. Burke & Co.; the gasfittings are by Messrs. Richardson, Slade, & Co.; the chancel stalls are by Messrs. Cox & Sons; the block flooring is by Mr. Gregory; and the organ is by Messrs. Hill & Sons.

The general contract for the church, which has been exceeded by only 20*l.*, was taken by Mr. Chappell, of Westminster; and the outlay, without the spire, is about 20,000*l.* The architect is Mr. Ernest C. Lee, of Bedford-row.

* The late Mr. W. H. Black, F.R.A.S., maintained that the appellation "Matfelon" seems to have originated in some custom of tolling a bell, or the performance of some ceremony on the approach of *felons* on their way from the City towards Execution Dock at Wapping, whereby they were *mated*, that is, subdued, scared, or affrighted, by the tokens of their approaching death.



ST. MARY'S, WHITECHAPEL : THE REREDOS.



ST. MARY'S, WHITECHAPEL: INTERIOR, LOOKING EAST.—MR. ERNEST C. LEE, ARCHITECT.

COMMON-WEAL *v.* BRICKS AND MORTAR.

THIS was the title of a paper read by Mr. R. E. Pownall, architect, before the Civil and Mechanical Engineers' Society, on the 7th instant. The author remarked that so long as a man had a country or district to himself, he need please but himself with regard to what and how he built. Non-observance of structural, sanitary, or other laws would recoil only upon himself, and occasion harm to none beside. When, however, the limits of a person's holding became more circumscribed, errors of any magnitude committed by him possibly affected his neighbour also, and this in a rapidly-increasing degree as the population increased in density. In these facts lay the reason for the restrictions which have by law been placed upon the legal axiom, that "a man may do as he likes with his own." As a distinguished minister once said, we as a nation "submit the more readily to control in the use of our own that we in turn may the more readily control the vagaries of our neighbours." Although, therefore, theoretically, "a man's freehold is his from the centre of the earth downwards to the sky upwards," yet, practically, it has been found necessary to say that he shall only use it to that extent subject to certain regulations. The cardinal points in which laws affect building operations of the ordinary domestic and commercial class are naturally (1) from the sanitary point of view as regards suitability for occupation, by reason of site, size, light, drainage, &c., including other matters of ordinary convenience; (2) from the structural point of view, by so regulating the materials, method, and manner of construction that the building shall be sufficiently substantial as to be efficient for its purpose, and also so arranged as not to be subject to undue risk of fire, either in itself or to or from its neighbours' premises. From these it will be obvious that considerably greater latitude could of necessity be allowed in the free and open districts of the country than could by any possibility be permitted within the close confines of a city. So far as the metropolis is concerned, the management of these matters is entrusted to the various vestries and the Metropolitan Board of Works, under Acts known as the Metropolis Local Management Act, 1855, and the Metropolitan Building Act, 1855, and the various Acts since made amending both of these. Provincial towns and rural districts are governed in a somewhat similar way by various local Boards, answering at once to both vestries and the Metropolitan Board of Works. These local Boards are, however, subject to a higher authority, called the Local Government Board. The Act under which the whole operate (except the metropolis) is the Public Health Act, 1875, and Acts since passed amending and enlarging its powers in individual directions. There is, however, this difference between the Metropolitan Board of Works and the various local Boards. The one, although it has the power to make various bye-laws, acts mainly under exactly-defined and direct statutory powers. The others act in accordance with bye-laws compiled under their own direction upon somewhat similar lines to the Act of the Metropolitan Board, and sanctioned by the Local Government Board, the result being that though, throughout the country, they mainly agree in principle, there is the widest possible diversity in detail. The approval of the central authority seemed to be accorded to almost any set of rules without much difficulty, inasmuch as the rules of different local Boards vary greatly in stringency and requirements, and thus give rise to many great anomalies; what is perfectly legal on one side of a road, for instance, being illegal upon the other side by reason of a different jurisdiction. The inconveniences to the building world of such an uncertain state of things, to say nothing of the unfairness to individuals, together with the insufficiency of the sanitary and other rules mostly in force, having been prominently brought to the notice of the Local Government Board, an endeavour was made to draw up a code of rules or bye-laws which should be in a greater degree capable of general application throughout the country. The opinion of several public bodies was sought, and the proposed code was published in July last, and has since been subjected to considerable criticism. The Local Government Board apparently collected and collated the various bye-laws they had sanctioned, reconciled differences between them as much as possible, and presented them in the form of a code which has scarcely the elasticity of the previous rules in being applicable to varying circumstances. It is a kind of tentative measure, not at present capable of exclusive application, but evidently intended to be so after some little experience has been obtained of its working. However, as almost every district of the kingdom is at present regulated by some series of bye-laws or other (confirmed and agreed to by the Local Government Board), none of which are so stringent as those now put forth, it is not unreasonable to suppose that the new ones will not by any means be voluntarily adopted, but that additional Parliamentary powers will be required before the code can be brought into general operation. Mr. Pownall then proceeded to give a long and critical account of the ninety-nine "model bye-laws as to new streets and buildings" suggested by the Local Government Board for general adoption by urban sanitary authorities and others working under the Public Health Act, 1875, concluding with the following general remarks:—Admitting the necessity of legislation on building operations, it becomes a question to what extent such legislation should be carried, and how it should be effected; whether the State should provide a kind of outline specification, as it were, in terms sufficiently general and elastic to reach nearly all possible cases, and whether such document should endeavour to define all that is objectionable, and, in fact, state only what should *not* be. The Local Government Board have taken the former of these views, and, I think, rightly so. Leaving out questions of detail, there is, I think, only one matter which might with good effect be introduced if these "ninety-nine articles of building" ever pass into a general law; and that is with regard to appointing a special tribunal other than the local magistrates before whom disputed points could be adjusted. I am aware that this would be difficult in rural districts, but, speaking for London, I know the horror with which magistrates seem to regard cases brought before them by district surveyors, and the hap-hazard way in which such cases are often dealt with by reason of the redundance of technical terms which the Court does not "follow." The local surveyor under the new laws must of necessity be a man of experience; and I believe could safely, to a certain extent at least, be trusted with *quasi*-judicial functions in at once stopping works which were proceeding, in his opinion, contrary to the law. Such an exercise of power would certainly have saved us the recent disastrous case at Hackney, and would act with but little if any hardship to the individual builders, as the matter could be immediately referred to the proper quarter and set right before harm was done. The new bye-laws are peculiarly silent as to any system of construction at all calculated to be considered fireproof, even to the meagre extent mentioned in the Metropolitan Building Act. There can be no doubt, however, that buildings in different and separate occupation are rapidly becoming more and more placed one above another,—*i.e.*, in flats,—instead of side by side. Under the new bye-laws, in the latter case they must be separated by presumably fireproof divisions, while in the former they are under no such necessity, notwithstanding the fact that fire spreads far more rapidly upwards than laterally. In fact, in the new bye-laws a rather important omission occurs, considering the light in which the matter has been looked upon recently. Under the Metropolitan Building Act the corridors, staircases, &c., of public buildings have to be of incombustible materials. Neither this provision nor any substitute for it occurs in the new bye-laws. It is true that faith in stone and iron as safe fireproof building materials has long since departed; yet there surely is a greater element of safety in a means of communication which fails at a temperature of some 600 or 700 degrees than there can be in one which is itself in flames at a very much lower heat. Considering the means of escape from most buildings, and knowing how long, or rather sometimes how short a time it takes for a fire to get "well alight," I know which I would rather have to traverse,—that is, from an inmate's point of view; the fireman's side of the question is rather different. As to "exemptions," it is undesirable that, as the Building Act and bye-laws professedly provide only for the minimum of safety, any body such as the Metropolitan Board of Works should be endowed with dispensing powers. Break a rule for one, and the difficulty is to refuse it to others without injustice. There will no doubt always be certain conditions peculiar to locality, and differing in each individual place, which should be taken into account in framing a general Building Act; still, most of the questions involved in the management of town structures, such as those relating to drainage, proportion of covered to uncovered area, fireproof materials, principles of construction, and many others, must be essentially the same wherever the object is the same, viz., to secure the maximum of accommodation on a given space, together with good constructional and sanitary conditions. The by-laws in question certainly seem to be calculated more for town than for rural districts. Much inspection is provided for on the part of the local authorities, but no fees; this, I am afraid, is by no means unlikely to lead to implicit reliance upon the urban authority to superintend work by persons employing builders without the intervention of an architect or engineer, more especially as there seems to be no penalty attached to doing work not in accordance with the by-laws if it is remedied when complained of. No district surveyor could give the amount of supervision that would be required under the new laws for the present scale of fees. It is instructive to remark the manner in which these suggested bye-laws have been received. In London, accustomed to the restrictions imposed by the Metropolitan Building Act and other Acts, they have on the whole been received with favour as a step further in the right and proper direction. In the provinces, where the restrictions have to a great degree hitherto been but of the slightest, an alarming outcry is heard, almost universally, in their condemnation. Not that the general run of building is worse in the provinces: rather the reverse; but rather that we equably endure there inconveniences which in London we should condemn as an intolerable nuisance,—4½-in. brick or lath-and-plaster party-wall, for instance. Of course there are men who for their own credit's sake, if for no other reason, do all they do in the best and most suitable manner. It is not for this class that laws are made, but rather to govern those who, trusting to the ignorance of the public generally, can foist upon it bad work, and make it believe that the shadow is even more solid than the substance. I would suggest for discussion the manner in which iron fireproof building, and similar matters, should be dealt with by a Building Act; also the limitation of size of buildings, and how far the convenience of one person must give way to the safety of the many. The extent to which general laws should go into detail is a subject also well worthy of discussion. Of course, if all buildings were faithfully carried out from the specification of a qualified architect or engineer, and if architects and engineers constituted a responsible professional guild to which only competent men were admitted, then, and only then, could these details be omitted from building laws. What we seem really to want is, as the *Builder** says, "a fair start upon right and sensible general principles, with the power of local modification and application." The question of "alterations" to a building, not sufficient to bring it within the scope of the bye-laws as a new building, surely should have some recognition in them, so that nothing should be added to an old building but what is in itself in consonance with the new laws. Figures for the dimensions throughout the laws would have been preferable to the words in which they are given; in fact, altogether, they are in an unhandy form for ready reference. Nothing is said in them as to the maximum height of walls; although, if flats are to be the rage, they will need to go up more than 100 ft., as at Mr. Hankey's buildings in Westminster. There seems to be no power of reference under special circumstances, as in the Metropolitan Building Act. There are the Bye-Laws, and nothing but them, although it is evident that a multitude of further matters must arise. Building matters, especially those relating to sanitary requirements, are in a state of rapid progression; changes of method least expected occur almost daily. These are just the points upon which professional opinion and experience are required before the suggested bye-laws become an Act of Parliament.

Royal Academy.—It is stated that the following gentlemen will form the "Hanging Committee" for the next exhibition at Burlington House:—Mr. Sant, Mr. Wells, Mr. Calder-Marshall, Mr. Davis, and Mr. Redgrave.

* Vol. xxxv., p. 997.

ON THE DECORATIVE TREATMENT OF MODERN SUBJECTS FOR THE DECORATION OF MODERN BUILDINGS.*

THE subject to which I am about to ask your attention appears to me of infinite importance at this time, seeing the great desire to have good and worthy buildings for public purposes, and the real and active endeavour to decorate the same; and it will be my aim, by argument and illustration, to urge a return to the true spirit of decorative work, as exemplified in the great remains of the past,—for I will at once disabuse your minds of the notion that the heading of my paper embodies an original idea. I assure you it is not so; its practice, if not "as old as the hills," is of the most remote antiquity; and the greater part, and certainly the most exact, of our knowledge of the people in their habits as they lived in that remote period,—in some instances *all* we know,—is derived from the remains of their decorative treatment of contemporary subjects. To put the matter clearly, I propose to maintain two points:—Firstly, that decorative work should be historical in the true meaning of that phrase. Secondly, that in public buildings it is imperative that it should be so. There are other methods of decoration, affording excellent scope for artistic skill, gratification of personal taste, or fantastic "fads," altogether harmless in their kind. Of those, at present I have nothing to say, but we will take the higher ground of asserting that it should be historical for national or municipal buildings; for in the past of which I shall speak, it would seem to have been the leading idea to identify a great national building (or, indeed, any other) with the people who built it, and thus to render its decoration a page of history, and a wonderfully-complete one too; and in contemplating their work you will remark the true artistic, or I may, perhaps, be permitted to say, republican feeling, by which the artists were actuated.

We not only see the ruler or king leading his armies or engaged in the chase,—and here you may notice a curious conventional touch in their treatment, for the figure of the king is always larger than the others,—but there is also an equally-faithful record of the occupations of the meanest of the people, matters of which, without such work, we should have no idea, for the history of literature only deals with kings and governors; and even if it were not so, such records in pictorial art are of infinitely more value than any written description could be. Briefly, their work bears indisputable evidence that their whole purpose was to "seize the life of life." And thus these artists worked; and if you would thoroughly sympathise with my feelings for their labours, go with this idea and carefully study the Assyrian wall-decoration in the British Museum, and afterwards seek out the pieces of Egyptian fresco paintings; and though you may perhaps smile at their occasional violation of the canons of art, you must remember that art was in its infancy,—that they were absorbed by the desire to represent truly what they saw, letting the method take care of itself, a witness of a true vitality in art. And as we depart with such infinite knowledge thus acquired, one thought may occur to you, as, indeed, it has painfully to me, whether, with all our present activity and resources in art, any work is being done which in the future will be such an eloquent record of our national life? To follow out truly a great principle in philosophy or chemistry, it is not necessary that we should use the language of the original discoverer, be it Greek, German, or any other; but this is precisely what we are doing in our art-decoration, for instead of portraying our people in their various occupations and costumes, and the flowers and fruits of our land and time, and using them in the spirit of the great artists, we blindly miss their purpose in vain endeavours to emulate their method of expression. I said flowers, &c., but here I most gladly recognise a fellow-worker in the same spirit in the gentleman who recently gave you a paper on "Ornament."† I allude to Mr. Lewis Day. Particularly apropos of this, I will quote you a passage from that eloquent writer, Mr. Ruskin, who says:—

"What do you suppose your descendants care for our imagination of the events of former days? Suppose the Greeks, instead of representing their own warriors as they fought at Marathon, had left us nothing but their imagination of Egyptian battles! And suppose the Italians, in like manner, instead of portraits of Can Grande and Dante, or of Leo X. or Raffaelle, had left us but imaginary portraits of Pericles and Miltiades, what fools we should have thought them! How bitterly we should have been provoked by their folly! Yet that is precisely what our descendants will feel towards us, so far as our grand historical and classical schools are concerned. 'What do we care,' they will say, 'what these nineteenth-century people fancied about Greek or Roman history? If they had left us a few plain and rational pictures of their own battles and their own men in their every-day dress we should have thanked them.'"

He further says:—

"Wilkie in his earlier days was an historical painter, and Chantrey an historical sculptor, because they painted and carved the things they saw, not men and things as they might have been or should have been. Etty and Flaxman, on the other hand, though great artists naturally, were lost minds, the one painting dances of nymphs in red and yellow shawls, after the manner of the so-called grand schools, and the other drawing outlines of muscular men straddling behind round shields. Of all the men whom you have come to call the great masters, there was not one who did not confessedly paint his own present world plainly and truly. Homer sang of what he saw, Phidias carved what he saw, Raffaelle painted the men of his own time, and every man who has risen to eminence in modern times has done so by working in his own way and doing the things he saw."

"Doing the things he saw": that is the whole gist of it, and is of the most absolute value in decorative work, for I would here remind you of this great difference between proper decorative and pictorial art. Pictures may live,—indeed, it would be idle to say otherwise,—quite independent of their subject, simply because they are complete in the handling and other technical qualities of art workmanship; but decorative work, as a rule, is too far removed from the eye for such qualities to avail, and its value is simply for what it tells, and its art that it should be told agreeably in colour; for, as all know who have done decorative work, the refinements of execution proper to a picture are out of place in it, and indeed militate against its effect; and this consideration still further bears out the idea that it should have something worth telling. And what can be better worth telling in most things than the truth?—truth in the matter represented? Such decorative work is real history-painting, for historical art so-called is really poetic representation; but we can get all round the life we are living, and with which we have an active sympathy, and by our special observance give delineations which by their art shall give delight to the present, and by their faithful record shall be of infinite value in the future. But what good can we do by repeating Classic or Mediæval work? It has been done as well as it could be done; such repetitions cannot add to our knowledge; indeed, it has a tendency to pervert it, for it is not uncommon for those who have grown wise by the labours of the past to add a little of their own, and overlook their masters. It may be copied, and fulfil the superficial purpose of decoration as a vehicle of colour, but I think you will agree with me that that is not sufficient for national work.

And now I will give you, in default of illustrations, some descriptions of national decorative work executed in the great times of the past, and, as accepted examples, the works of the Assyrians, Egyptians, and, greatest of all, the Greeks, as exemplifying to the fullest extent the principle I am endeavouring to establish. (The descriptive selections are from the works of Wilkinson, Layard, Lübke, and other writers on the subject.) Of the Egyptians is the following:—"Even in the earliest tombs of the old kingdom, about 3,000 B.C., the simple labours of agriculture and cattle-breeding, the relations and affairs of varied private life, are faithfully and fully depicted. On others we find incidents of private life, work and employments of various kinds, recreations and games such as are still in practice; cheerful, social doings and festive entertainments, as well as religious ceremonies, sacrifices, and other solemn acts. In various scenes of war all the different races are unmistakably designated by their characteristic physiognomy and costume. In all these representations an enlightened memorial of reality is always aimed at." Among the works from Nimroud, in the British Museum, and those from Khorsabadd, in the Louvre, as it was among the Egyptians, so here the decorative arts are chiefly applied to the delineation of active and contemporary life, such as their wars, hunting the lion and other wild beasts, "and all these incidents are depicted with great life and vigour. We perceive everywhere an enlightened, clear mind aiming at the simple grasping of the reality." Again, Greek art aimed not so much at the delineation of the inner life (or expression) as of outer circumstances or actions. For instance, "the incomparable frieze reliefs of the Parthenon exhibit the whole exuberance and variety of Greek life. In the great frieze by Phidias, of a procession, is seen all that was beautiful and excellent in Athens: the bloom of maidenhood, the fresh strength of their youths trained in gymnastic exercises, and the solemn dignity of the magistrates and other officers. In fact, the greater part is devoted to the vast sphere of true historical life, and the events and circumstances of the period." So Greek vases: though frequently decorated with scenes from the heroic legends, they are portrayed in contemporary costume, and (corresponding with the character of the period) delineations of every-day life in great variety. And it is especially so on the walls of temples and palaces, where we see depicted the events in the life of the ruler. On the walls of Thebes we see plainly represented all these incidents. And why are all these works so valued and so famous? Because, in addition to their beauty and skill as works of art, they are full of a sympathy with observed life (and, indeed, hold the mirror up to nature), affording us not merely an insight into a highly-developed civilisation, but also furnishing us with complete information of the nature and occupations of the people by whom they were executed. It is curious to remark the emancipation from tradition in all branches of art, with the exception of the decorative. Classic landscape has long given way to the vigour of naturalistic representation. It is the same with figure-subjects. Many of the most popular pictures of late years have been derived from modern subjects; and what sculptor designing a statue of a modern hero would venture, nowadays, to clothe it in Greek or Roman costume? And yet, years ago, such was the accepted practice, as witness the monstrosities in St. Paul's and elsewhere. That tradition should still be a spell on decorative art I attribute to the fact that the impulse towards its exercise is of recent growth, and that the mine of the past is not yet exhausted. But let us take heart in this business, for the time is certainly coming ready for the acceptance of true modern work. And, *àpropos* of this, you will pardon my recalling to your memories an exactly parallel case of transition of opinion in the pictorial arts. All of you, I presume, know "The Death of General Wolfe," by West, but you may not remember the story in connexion with it; for, previously to that period, heroic deeds of battle of any time in English history had been represented in Greek or Roman costume. West had the courage to dismiss that pedantry, and went direct to nature, even to the cocked hats and blunderbusses, and his defence of this "heresy in art," as it was called, is so admirable that I will venture to quote it. He says:—

"When it was understood that I intended to paint the characters as they had actually appeared on the scene, the Archbishop of York called on Reynolds and asked his opinion, and they both came to my house to dissuade me from running so great a risk. Reynolds began a very ingenious and elegant dissertation on the state of public taste in this country, and the danger which any innovation incurred of contempt and ridicule, and concluded by earnestly urging me to adopt the costume of antiquity, as more becoming the greatness of my subject than the modern garb of European warriors. I answered that the event to be commemorated happened in the year 1758, in a region of the world unknown to the Greeks and Romans, and at a period of time when no warriors who wore such costume existed. The subject I have to represent is a great battle lost and won, and the same truth which gives law to the historian should rule the painter. If, instead of the facts of the action, I introduce fictions, how shall I be understood by posterity? The classic dress is certainly picturesque, but by using it I shall lose in sentiment what I gain in external grace. I want to mark the place, the time, and the people, and to do this I must abide by truth."

I must give you the sequel:—

"The Archbishop and Reynolds returned when it was finished; Reynolds examined the picture with deep and minute attention for half an hour. He then said, 'West has conquered; he has treated his subject as it ought to be treated. I retract my objections; I foresee that this picture will not only become one of the most popular, but will occasion a revolution in art.'"

The scene is one to be remembered in English art, for it was one of those moments so necessary at times in art, science, and morality when a brave blow is given to that blind and sometimes foolish giant, Dogma. Again, as touching a technical point of art, there are those who contend that the whole essence of decorative art is the representation of beautiful forms. That I contend against most absolutely, *for the primary effect of decoration is, or should be, a result of colour.* The appreciation of Japanese decorative work is now so general that I will

* A paper by Mr. E. Buckman (member of the Society of Painters in Water-Colours), read before the Architectural Association on the 8th inst.

† See *Builder*, p. 60, *ante*.

venture to say we all heartily admire it; but who would venture to say that its attraction is beauty of form? Indeed, the form, especially of their figure-work, is exceedingly grotesque, but their management of colour is superb, and it is to their greatness in this essential faculty, added to the marvellous vitality with which they seize the characteristics of every living thing, be it man or woman, bird, beast, or flower, and express it with an art of admirable simplicity and skill, unfettered by tradition, that its power is owing; indeed, they copy life with such fidelity, that they can hardly be said to "invent," so that looking at their work is like gazing out of a window on their daily life and doings. Yet their works have an air of so much originality that they attract those ignorant of art equally with those of culture; and this is precisely the influence the decorative work in our public buildings should have, and indeed would have, if done in the same spirit. In support of the general propositions I have laid down, you will pardon me giving a few extracts from my note-book,—quotations from various authorities. Professor Ruskin says:—

"The first element is the love of Nature leading to the effort to observe and report her truly. This is the first and leading element. Review for yourselves the history of art, and you will find this to be a manifest certainty, that no great school ever existed which had not for primal aim the representation of actual fact as truly as possible."

Again he says:—

"Now, therefore, you who wish to encourage art in England have to do two things with it; you must delight in it in the first place (that can certainly be placed to our credit), and you must get it to serve some serious work in the second."

The late Owen Jones, whom I believe you value as an able writer and sound authority on decoration, says:—

"I have endeavoured to show that the future progress of decorative art may be best secured by engrafting on the experience of the past the knowledge we may obtain by a return to nature for fresh inspiration We should regard as our inheritance all the successful labours of the past, not blindly following them, but employing them as guides to keep the true path. . . . . The principles discovered in the works of the past belong to us, not so the results. It is taking the ends for the means."

I shall conclude with a quotation from an admirable address on "The Decorative Arts," delivered recently by Mr. William Morris:—

"For your teachers, they must be Nature and History. As for the first, that you must learn of it is so obvious that I need not dwell upon that now. . . . . As to the second, I do not think that any man but one of the highest genius could do anything in these days without much study of ancient art, and even he would be much hindered if he lacked it. If you think that this contradicts what I have said about the death of that ancient art, and the necessity I implied for an art that should be characteristic of the present day, I can only say that in these days of plenteous knowledge and meagre performance, if we do not study the ancient work directly, and learn to understand it, we shall find ourselves influenced by the feeble work all round us, and shall be copying the better work through the copyists and without understanding it, which will by no means bring about intelligent art. Let us, therefore, study it wisely,—be taught by it,—all the while determining not to militate it or repeat it; to have either no art at all, or an art which we have made our own."

With this testimony, I will ask you, in conclusion, Is there any great building of our time which could supply such an authentic history as those of the past which we have reviewed? I know of none, yet noble national and municipal buildings are in existence, and are rising all over the land. Why, if they are to be decorated, should they be clothed with lies rather than the living truth? The time, I venture to foretell, is coming when such vicious practices will not be tolerated, but when art for such a purpose shall be truly exercised, and thus, contributing to historic record, shall in the future be as valuable as the works of those great nations of the past, so that the buildings we leave shall indeed be living stones, telling to our posterity and succeeding generations the manner of men we were in our day in the old time before them.

Mr. H. H. Statham, in proposing a vote of thanks to Mr. Buckman for his paper, observed that the whole subject was one of the most important, with regard to the artistic treatment of architecture, that could possibly be discussed. It really came to this,—whether the real interest of decorative art was to lie in adopting a kind of idealised treatment founded upon what was called "Classic" art, or whether it was to lie in copying directly from the life of the present day. On the whole, he was very much in sympathy with the lecturer's remarks on his view of the subject, but possibly he had unduly emphasised his views, especially on some points. In the first place, it had been laid down as a principle that the decoration of public buildings should be, before all things, historical, and it was perfectly certain that in Greek and Assyrian buildings that was the case. It might be urged, however, that the reason of this was, that there was an impulse to draw historical subjects because there was then no national literature, and therefore the value of ornament as history was much greater then than was now the case. Considering the means now taken for the preservation of literary records in the great libraries and museums, he thought that the importance of making decoration historical was not so great as it was in the days when popular literature did not exist. The question arose, how far could our modern costume be introduced into the decoration of our buildings? Everybody admired the Pan-Athenaic frieze, to which reference had been made, and which was simply a transcript of the scene that took place during the annual festival at Athens. It was slightly conventionalised, as in the horses, which were not quite natural, but the conventionalism was only such as to bring the whole within the conditions of sculpture. A real parallel to this frieze in modern life would be to decorate the Houses of Parliament with a frieze representing the Royal Procession, with carriages, horses, soldiers, and policemen, on the occasion of the opening of Parliament. If this scene were faithfully depicted, including the chimney-pot-hats and coat-tails of the bystanders, it was a question whether it would not be regarded as absurd. He believed that people had a sort of innate feeling for Classic art. The moderns were less child-like in their notions of art, and when they took figures to adorn a building they wished to have ideal representations in stone of abstract ideas, rather than exact copies of what they saw around them. One reason that might be urged in favour of the Classic style in decoration was that Greek costume was independent of fashion, whereas our own fashions in costume changed very much, and it was exceedingly difficult to attach a permanent architectural character to passing fashions. Greek decorative sculpture was really good, not because it was Greek, but because it was abstract. What we wanted was a kind of abstract poem in stone rather than what we actually saw. He agreed with Mr. Buckman in saying that Japanese work was beautiful in colour, but not always in form. Now, we admired the Pan-Athenaic frieze, not for colour, but for the beautiful lines of its sculpture; and regarding sculptural decoration in reference to its application to the exterior of buildings, form was more important than colour in this climate. The kind of decoration which would lend itself best to fine forms was more important than that which depended for its effect entirely upon colour. He would sum up in this way: if one had to decorate the exterior of a building with sculpture,—say a bas-relief,—what the majority of thinking people would admire would be, perhaps, portraits of contemporary persons as realistic in expression as they could well be; but there would be nothing incongruous in idealising their costume so as to separate it from the passing fashions, and give it a permanent value. In conclusion, Mr. Statham expressed his admiration of the way in which Mr. Buckman had illustrated his principles in his works.

Mr. W. H. White, in seconding the vote of thanks, said he laboured under a disadvantage in following so fluent a speaker as Mr. Statham, who had not only said many good things in his speech, but he had said them well. He (Mr. White) had come to the meeting with special pleasure, feeling that Mr. Buckman would instruct and delight with his pen as he had already done with his brush and pencil. He could only regret that the lecturer had not brought with him some of those admirable pictures which he had exhibited at the Royal Academy, such as "London Street Minstrelsy," and "The Tug of War," which were admirable examples of what contemporary decoration should be. Mr. Buckman's attempts had been very nearly akin to what only the ancient Greeks actually effected, viz., to portray on the walls of their buildings, in marble or stone, the customs and the costume of their own time and of their every-day life. And the Greeks appeared to have continued this at any rate during the earlier part of the Roman domination; he (Mr. White) doubted, however, from what he had seen on the painted walls of houses in Pompeii, whether the architecture there represented was really anything else but fantastic, for he could find nothing in Italy which resembled the wonderful columns of bronze or iron which occurred in many of the representations. He should hardly think, either, that all the pictures on the walls could be called representations of Pompeian life. In the Middle Ages, at least until the middle of the thirteenth century, Roman tradition continued, and with such power that it was difficult to believe contemporary manners to have been faithfully represented, either in sculpture or painting. It was impossible to avoid thinking that old pictures,—in the few early MSS. extant for instance,—had been copied and re-copied from generation to generation and from century to century. The question would arise, if we painted the walls of our sitting-rooms and dining-rooms with subjects of every-day life, whether after a few years they would not pall upon us. To be always looking upon the same picture, however beautiful, was rather tiresome, and it would be desirable, he thought, to be able to change the pictures occasionally. Another point to which he wished to allude was that while decorating rooms with paintings and bas-reliefs, there should also be introduced what the Assyrians introduced with such good effect into their sculptures, namely inscription-work. The lines of printing or writing upon Assyrian sculptures were very beautifully arranged, and such a mode of decoration had the further recommendation that it was calculated to be useful to posterity. If nicely and not too prominently arranged, inscriptions could be more usefully employed than a lot of meaningless mouldings. What would the Egyptian obelisk be worth if it had not its hieroglyphics to give it interest? Mr. White, in conclusion, asked permission of the president to say that he had been obliged to postpone the paper he had undertaken to read at the next meeting. He promised, however, at the beginning of next session a comprehensive paper on the Paris Building Laws; and he was sure that his friend Mr. Mathews would be able to devote the whole evening of the 22nd to the suggested "Model Bye-laws."

Mr. Holyoake congratulated Mr. Buckman upon having read a very excellent paper. He (Mr. Holyoake) came more especially to hear what arguments could be used against what appeared to him to be almost an artistic truism. The logic of the argument adduced by Mr. Buckman appeared to be so strong that although the remarks of Mr. Statham were very ingenious and thoughtful, they did not touch the real principle advocated. The objections raised were directed rather to evils that might arise if the principle were injudiciously carried out or exercised with insufficient discretion. Whether the subjects which Mr. Buckman had himself taken ought to be confounded with his principles was a question worth some consideration. There were, however, many contemporary subjects, which could be used for decorative purposes without objection on the score of ugliness of costume. It was clearly proved that there never had been an art, whether decorative or otherwise, which had held a permanent position in the world, which was not contemporary. The question whether modern costume could be treated with success for sculpturesque purposes was, he admitted, a very serious one; but whatever ingenuity might do towards the solution of the problem,—and it could do a great deal,—it was imperative that a contemporary fact should be the basis of every piece of contemporary decoration. How it should be treated would be matter for the discretion of the artist.

Mr. R. Phené Spiers said that the question how far the artist was justified in adopting modern costume in the representation of historical scenes was one which had often been taken up. He was almost entirely of Mr. Buckman's views on the matter. Mr. Walter Crane, who was, taken all round, the greatest decorative artist we had, had in his book-illustrations and other works shown how successfully modern costume could be treated and adapted to artistic purposes. The real difficulty in the way of the decoration of our buildings was that architects could not persuade their clients to allow them to call in the aid of painters and sculptors to work with them,—which was done very generally in France.

Mr. S. Flint Clarkson said that the history of West's painting of the "Death of Wolfe," referred to, bore on only one of the points which Mr. Buckman desired to establish. It was in itself an easel-picture, not intended as an integral portion of the decoration of a building, and was in full colour. Though it might be adduced in favour of the argument for fidelity and truth in

the representation of contemporary subjects, it did not bear on the question whether modern subjects should be exclusively selected for the decoration of modern buildings. As to the selection of modern subjects for decorative treatment, he believed that the things that would interest posterity were the very things that most interested ourselves.

Mr. Walter Crane said he agreed in the main with Mr. Buckman's views, though the very fact that the subject should need discussion showed that there was possibly something to be said on the other side. It was difficult to imagine the sculptor of the Pan-Athenaic frieze, for instance, discussing with himself whether or not he should represent his figures in the costume of the Egyptians. As to modern costume, it was almost as difficult to say what it was as to say what was modern architecture; in both it was difficult to say where the modern began and where the ancient ended. As to the treatment of decorative subjects, it all depended upon the aim of the decorator. If he intended to paint for the antiquary and historian, he might adopt Mr. Buckman's suggestions; but it was very probable even then that posterity would find in the pages of *Punch* the best records of our costume. As to the ceiling of the Sistine chapel, it could scarcely be wished that the figures should have been clothed in the costume of the sixteenth century.

Mr. H. H. Stannus said that Mr. Buckman had quoted words from Ruskin leading up to the dictum that every artist ought to paint pictures in the costume of his time; because an artist was not an archæologist. In Paolo Veronese's "Marriage at Cana," the figures were represented in the costumes of Venetian noblemen, gentlemen, and ladies, of the sixteenth century; but had Michelangelo represented his grand figures in the Sistine Chapel in contemporary costumes they would have been ridiculed by all posterity. The fact was that Ruskin had only stated half a truth. The painter should only depict the costumes of his own time, provided that he only painted scenes of his own time. If, however, he painted scenes in past history, he should take the best means of being archæologically correct in his costumes and accessories. He agreed with much that had been said as to the possibility of making existing costume presentable in pictures, and he thought that the coats and hats we wore now would be thought as picturesque a hundred years hence as we thought the coats and hats of a hundred years ago.

Mr. W. Scott said it seemed to him that the painters would have to exercise considerable discretion in the selection of modern subjects for purposes of artistic decoration. Many incidents of modern life were undoubtedly capable of artistic treatment, but it was difficult to see how the steam-engine, a subject pre-eminently associated with modern progress, could be satisfactorily treated if introduced into art decoration, for no decorative painting could be entirely satisfactory if the things depicted were themselves ugly.

Mr. R. E. Pownall said the subject of the paper was a wide one, and one in which architects, painters, and sculptors must work together harmoniously if satisfactory results were to be obtained. A notable instance in which modern subjects had been introduced into the decoration of a modern building was one with which, he was afraid, an architect had very little to do; he meant the Albert Hall, where in the external tile-frieze, engineering, iron-founding, the electric telegraph, and modern husbandry were depicted with great success, the costumes of the figures being all essentially modern. That people cared more for subjects of their own time than for antiquarian or historical subjects was, he thought, proved by the fact that in the Academy and at other exhibitions of pictures a great many more people crowded round such works as Mr. Fildes' "Casuals," and Miss Thompson's "Roll Call," than gathered round the most charming and interesting historical painting. The public taste in this respect was seen in the demand for illustrated newspapers, which were mainly devoted to the representation of passing events. In *Punch* the costumes of the figures represented were for the most part modern, but Mr. Du Maurier's pictures were always artistic, notwithstanding that the "claw-hammer" constantly figured in them. One point frequently lost sight of was, that there was a great difference between the treatment desirable for an easel-picture and that desirable for a painting intended as a permanent decoration. As to selection, the painter was surely under no obligation or necessity to paint anything which he felt he could not treat successfully.

Mr. L. F. Day agreed that it was a matter for the artist's own choice what subjects he painted, whether for decoration or for easel-pictures. The great difficulty was to get good artists to do decorative work, as they got such high prices for easel-pictures that they did not care to "lay themselves out" for it. As to the works of the old masters, he did not suppose any of the great historical works of painted decoration were painted by one man. The old masters had whole hosts of pupils working under their supervision, who, no doubt, did much of the filling-in of the works with which the name of the master-minds only were associated. To this division of labour was no doubt due the severity of treatment which characterised the works of which he was speaking, for it was necessary under such circumstances to dispense with delicacy of outline.

The vote of thanks having been put and carried,

Mr. Buckman briefly replied on some of the points raised in the discussion, his remarks being to the effect that while it was true that we had now special means for preserving books, and while, at the same time, we had a pictorial literature, it was very doubtful indeed whether such records of our doings would survive for two or three thousand years, as had been the case with the wall pictures of the Assyrians and Egyptians. Furthermore, many of the pictures in our illustrated newspapers, while giving a fair general idea of the event or scene depicted, were often either incomplete or absolutely incorrect in detail. He did not think it would be impossible to treat with good artistic effect in the form of a frieze the procession of the Queen to open Parliament or even the Lord Mayor's show, but to do either successfully would need, as in other things, judgment in the selection. As to modern costume, it was not unsusceptible of effective treatment. It was not absolutely necessary to "fix" the fashions. Some of the present fashions in women's dress were very pretty. As to the paintings in the Sistine Chapel, it should be remembered that the figures of the prophets and sibyls were abstract representations, and therefore it was, in his opinion, perfectly allowable that they should be clothed in Classic drapery.

THE DUCAL PALACE, VENICE.

SIR,—In his Royal Academy lecture, reported in last week's *Builder*, Professor E. M. Barry criticised the famous Venetian palace as essentially faulty in design; "no skilful architect would place all the weight at the top of a building and all the lightness below;" and he added that the design bore evidence of having been altered in its execution, and of being the work of different architects.

Every rightly-constituted architectural mind would concur in the soundness of the criticism, and the probability of the conclusion drawn; but, in fact, I believe there is no need for conjecture in the matter at all. If Professor Barry turns to the last-published portion of Yriarte's fine work on Venice, he will find in the chapter on "the Doge" a reproduction of an old engraving representing the ceremony of the wedding of the sea, in which the Ducal Palace is shown with a light upper story, pierced with good-sized windows, and totally different from the heavy mass of the present building which is the delight of "modern painters," and the object of criticism with modern architects. The engraving is not dated, but is crude in execution, and obviously of an early period, and there can hardly be a doubt that it represents the first phase of the Palace before the re-building of the upper portion. Attention is drawn to it in the review of Yriarte's book in the *Builder* of January 26th of this year.

H. H. STATHAM.

ST. BOTOLPH'S, BISHOPSGATE.

SIR,—Will you allow me, through the medium of your paper, to inform the citizens of London, and the public generally, that the fine old Church of St. Botolph, Bishopsgate, is now being decorated from my designs, and under my immediate superintendence?

My great object throughout has been to keep the general colouring suitable to the style of architecture, and to use my colours in such a way as to bring out the architectural features of the building.

J. T. CARTER.

THE FALL OF BUILDINGS IN THE HAYMARKET.*

THE inquest into the cause of the death of Mr. William Baron was resumed and concluded at the St. Martin's Vestry-hall on Friday, the 8th inst., before Mr. St. Clair Bedford, coroner for Westminster.

Mr. W. Wyke Smith watched the case on behalf of the Metropolitan Board of Works; Mr. Norman Bazalgette appeared for the district surveyor (Mr. Robert Walker); Mr. Poland for Messrs. Newman & Mann, the builders; Mr. M'Coll for the relatives of the deceased; Mr. E. Clarke for the architect (Mr. W. Wimble); the Hon. J. de Grey for the owners of the house in which deceased lived; and Mr. Reid for Messrs. Shaw & Co., who supplied the ironwork.

Mr. Charles Markham Chittick, examined by Mr. Reid, said he was a civil engineer, and partner in the firm of Messrs. M. T. Shaw & Co., engineers and ironfounders, of Cannon-street, E.C. His firm contracted for the supply of the whole of the structural ironwork required for the new building in the Haymarket. They contracted to supply both wrought and cast iron. On the 3rd of September last proposals were made to his firm by Mr. Lunn, the manager for Messrs. Newman & Mann, the builders, to supply them (Newman & Mann) with the ironwork required for the new building, as shown on the architect's drawings. On the same day he (Mr. Chittick) wrote to Messrs. Newman & Mann naming the prices at which they (Shaw & Co.) would be prepared to undertake the work, stating at the same time that the wrought-iron work would be manufactured by them at their Waterloo Bridge Wharf, and that the cast-iron columns would be procured by them from some London foundry. Their offer was accepted by Messrs. Newman & Mann, together with a suggestion made by them (Shaw & Co.) a day or two later, that to ensure accuracy of bearing one upon another the tops and bottoms of the cast-iron columns should be turned in a lathe, in accordance with their invariable practice in such cases, at an extra cost of 7*l.* 10*s.* for the entire job. In compliance with this arrangement, the wrought-iron girders and the rolled-iron stanchions and joists were supplied direct by them, and they commissioned Messrs. Horn & Co., engineers and ironfounders, of High-street, Whitechapel, to cast the columns, which were delivered direct on to the building works in the Haymarket by the founders, without being seen by or coming on to the premises of Messrs. Shaw & Co.

Mr. Nathan Solomon Joseph, of the firm of N. S. Joseph & Pearson, 34, Coleman-street, examined by Mr. Poland, said he was an architect and surveyor, and had been in practice for twenty-one years. He had known the firm of Newman & Mann for more than twenty years, and they had been the builders of a large number of structures of which he had been the architect,—to the extent of 80,000*l.* or 90,000*l.* They had obtained the whole of that work by competitive tendering, in the usual way. The day after the fall of the buildings in the Haymarket they consulted him, and requested him to make an examination of the *débris* in order to ascertain, if possible, the cause of the accident. He had no previous knowledge of the building. He had examined the remains, and also the plans and working drawings of the new building. The model [produced] had been made under his supervision, in exact accordance with those drawings, with the exception of the party-wall, which was shown on the plans as a new wall throughout. He had been many times to examine the remains of the building, and attended when Mr. Vulliamy, the Superintending Architect of the Metropolitan Board of Works, made his inspection, Mr. Wimble being also present. He (Mr. Joseph) had carefully calculated the weights that would be upon the different parts of the new building. Upon the old party-wall the weight per square foot on the part where it was cut away, *i.e.*, upon the balance of the wall which remained after the cutting away, would be 4¼ tons per square foot, assuming that the quantity cut away was as much as was stated by Mr. Wimble. On the assumption that the quantity cut away was not more than was stated by the foreman, Gooch, the weight upon the portion of the wall where it had been cut away would be, roughly speaking, about one ton less per square foot. In his (witness's) judgment, a safe

* See pp. 84, 121, 175, 227, and 249, *ante*.

weight to put upon an old party-wall, if it were sound, was from 7 to 8 tons per square foot. If a party-wall were sound enough to be kept up, it ought to bear that load. An old wall was as good as a new one, if sound. He had calculated the weight which was borne by the iron stanchion which rested on a portion of the old party-wall next to Mr. Baron's house and carried one end of the longitudinal wrought-iron girder or bressummer which supported the Haymarket front of the new building. The total weight resting upon the stone base (which in its turn rested on a part of the old wall) would be 24½ tons, including the weight of the stanchion itself. The weight per square foot upon the old brickwork beneath the stone base would be 18½ tons. He had carefully examined the ruins of the old party-wall, which was completely crushed, with the exception of the underpinning, which was perfectly sound. From the condition of its remains, he should say that the old party-wall could not have been sufficiently sound to warrant its retention. The iron stanchion referred to had fallen nearly perpendicularly, and almost *in situ*, and was found leaning against the wall of the front basement area, thus, /. It had dropped down on its foot. The brickwork upon which it had rested was crushed away in a sloping direction, exhibiting a line of shear or slide in the direction in which the stanchion had fallen. In his judgment, the slide was caused by the compression and crushing of the old brickwork. The stone base upon which the stanchion rested was unbroken: it had simply slidden off. In his opinion, the old brickwork upon which the stanchion rested was insufficient to carry the weight put upon it. Judging from what remained of the old party-wall, he should say that it would not have been safe to put more than 7 or 8 tons per square foot upon it. The effect of the giving away of the stanchion would be to let down the horizontal girder supporting the Haymarket front of the building. The sticking of the doors in Mr. Baron's house would indicate some movement or settlement in close proximity, but such slight settlements very frequently happened when a tall building was erected next to a low one. The sinking of the flagstones in the kitchen of Mr. Baron's house, stated to have taken place about six weeks before the date of the accident, would not, he thought, have been due to the under-pinning of the party-wall done in August. He had carefully examined the position and condition of each of the iron columns, stanchions, and girders, and had prepared a plan [produced] showing their exact position in the *débris*. Not one of the columns in the basement was broken, notwithstanding that one of these unbroken basement columns was a very defective one. The columns in the basement would, of course, have to bear a much greater weight than those on the ground and upper floors. Altogether, there were five imperfect columns, three out of the five being broken. There were thirteen columns in which he could see no defect whatever: they appeared to be perfect. Of these thirteen perfect columns, four had been broken by the fall of the building. The breaking weight of each of the basement columns, supposing them to be perfect, would be about 500 tons. The breaking weight of the broken column on the first floor would be about 300 tons. The safe weight to put upon such columns was usually considered to be one-tenth of the breaking weight, so as to allow ample margin for imperfection in casting and for sudden jars. He did not think that any of the columns had broken from having to bear an undue weight, because those in the basement, which had to bear the greatest weight, were none of them broken. He believed that the columns which had broken were broken by the fall of the building. In his judgment the cause of the accident was the giving-way of the old brickwork beneath the stanchion at the end of the Haymarket front next to Mr. Baron's shop. He believed that when the stanchion slipped, the weight upon the bressummer carrying the greater part of the Haymarket front of the building caused it (the bressummer) to drop down at the end which had been borne by the stanchion, exerting an enormous leverage upon the centre column in the Haymarket front. The weight of the superincumbent brickwork and stonework carried by the bressummer in question was about forty-nine tons. The leverage exerted by this great weight broke the ground-floor column in two, and it fell in a northerly direction,—*i.e.*, in the direction of the frontage line towards the corner of Panton-street, the superincumbent masonry falling in the same direction, and carrying the whole of the building with it. He was led to this conclusion from the fact that, as shown on the plan he produced, all the columns had fallen in almost the same direction,—almost due north, or towards Panton-street. The longitudinal iron girder or bressummer supporting the Haymarket front was carried by the fall of the building in a straight line along the line of front for a distance of about 14 ft. from its bearings. He believed that the lower portions of both the Haymarket and Panton-street fronts fell outwards, and that the upper parts of both fronts fell inwards. He could account for this from the fact that the external faces of the front walls were of masonry, with thin joints 2 ft. or 3 ft. apart, while the interior of the walls was of brickwork, with the joints wider and much more numerous; consequently, the interior portions of the walls contained much more compressible material than the exterior, and this would, in his opinion, cause the walls to fall in the way he had suggested. The staircase trimmers being fixed in the party-wall were pulled over away from it when the building was falling, and the shock and pull thus imparted were the cause, in his opinion, of the fall of the party-wall. The party-wall had fallen almost vertically, *i. e.*, almost directly towards or upon its base. He did not think that the circular girder at the corner had anything to do with causing the accident. There was very little weight supported by it, there being window-openings all the way up the corner. If the old party-wall were out of plumb, it would of course have a considerable tendency to fall in. In his judgment, the primary cause of the accident was the crushing away of the brickwork under the iron stanchion at the end of the Haymarket front. In other words, the accident, he believed, had arisen from an error of judgment in resting a stanchion which had to bear a great superincumbent weight upon a small portion of the old wall. It was a decided error of judgment to put so great a weight upon so small an area, especially of old brickwork. Judging from the evidence he had heard, and from what he saw on carefully examining the *débris*, he should say it was a great error of judgment to build upon an old wall so much out of plumb as this was stated to be. He did not believe that the cutting away of the wall, as described by previous witnesses, had anything to do with the accident. His reason for saying this was that if the cutting away did cause the accident, it must be concluded that a weight of 4½ tons on the square foot *did* crush the old brickwork, while a weight of 18½ tons per square foot *did not* crush it, unless the wall failed at both points at the same moment, which was, in his opinion, quite contrary to and beyond the probabilities of the case. If the work had all gone together, the stanchion next to Mr. Baron's shop would, in his opinion, have been dragged over in the same direction as the iron columns, *i.e.*, in the direction of Panton-street. He should not have thought of inserting stone steps into the old wall.

Cross-examined by Mr. Clarke, the witness said that a wall which was out of plumb ought not to have been built upon. It was but a matter of common prudence to plumb an old wall before commencing to "raise" new work upon it. It was quite possible for a wall to be considerably out of plumb, and yet for such a circumstance to be unnoticed by the eye, unless the defect were looked for. It was frequently the case that old walls did not "string straight" from back to front: that they were found with a slight wavy or in-and-out surface. New work raised on such walls would necessarily "oversail" slightly in some parts, but such walls might generally be safely used unless they were out of plumb vertically. He did not think that it was wise to cut into a wall which was out of plumb; in fact, it would be dangerous to use such a wall as had been described, *à fortiori* to cut into it. It was a very great error of judgment to cut into the wall, but he did not believe that the cutting of the wall was the cause of the accident. The amount cut away was only one-forty-seventh of the entire area so operated upon. Did not think that the recess cut into the wall as described was a "chase" within the meaning of the Metropolitan Building Act. There was no definition of "chase" in the Act. He should define a "chase" to be a long groove built or cut in brickwork or masonry. He did not believe that a recess of the shape and dimensions of that described as having been cut in the wall was a "chase." He should say that to cut a perpendicular "chase" from top to bottom of a wall would weaken the wall more than the cutting away of such a recess as had been described, as in the former the bond would be more broken. He should not have used the old wall at all had he been the architect of the new building, and therefore it was useless to ask him whether he should have allowed it to be cut into. He adhered to the belief that the accident was caused by putting the stanchion referred to on the old brickwork, which, immediately underneath the stone base, was completely crushed. He believed that the iron girder or bressummer was not tied to the stanchion, but that fact would not account for the stanchion not being dragged over in the same direction as the rest of the ironwork. The iron stanchion had not been turned completely round, but was twisted at right angles to its original position; he could not say in what direction. He did not know the dates at which the various portions of the superincumbent structure had had their weight brought upon the stanchion. Assuming that the whole of the weight had been on for two or three months, it was quite possible that the work might have stood "by accident." Thought that it was an accidental circumstance that the small area of old brickwork under the iron stanchion was not crushed under its weight of 18½ tons per square foot much earlier than he believed it was. Could give no explanation of its having stood so long, comparatively, and then suddenly yielding. Presumed, however, that extra structural weight was put upon the building day by day, and understood one of the previous witnesses to say that a number of floor-boards and stone steps had been delivered on to the works, and stacked on parts of the building, within a few days of the building falling. If so, this extra weight would be felt at a weak point. Believed that the old brickwork under the stanchion must have been ready to crush at any moment. The cutting away of the recess would, no doubt, somewhat weaken the party-wall; but if, as had been stated, before the men left work the recess had been two-thirds or three-fourths filled up with new brickwork in cement, this, even in the four hours which elapsed between the men leaving work and the time of the accident, would have partially restored the strength of the wall. The crushing-weight of brickwork was from 20 to 30 tons per foot super., depending upon the nature of the bricks and the mortar or cement. There was great difference of opinion as to the loads which brickwork would bear, but it arose from the variableness of the materials; there would not be much difference of opinion upon identically the same bricks and mortar. In his (witness's) judgment the safe load for brickwork was from 8 to 10 tons per square foot.

The Coroner.—Believing, as you say you do, that the brickwork under the stanchion was liable to give way at any moment, do you think that the cutting of the recess would increase the tendency of the wall to give way?

Witness.—I do not think that the cutting of the wall accelerated its fall, because the nearest point at which the work was cut away was 13 ft. from the point where the stanchion rested.

By Mr. Bazalgette.—Would not say that the space cut away was in compliance, even as a recess, with the terms of the Building Act. Thought it was beyond the limits of size prescribed by the Act. Would not say that it was a recess in accordance with the rules of the Building Act. A recess ought to be arched over, but if the cutting into the wall was as shallow at the top as had been described by some of the witnesses, the arch, if there could have been one, would have had a soffit of only 1½ in., which was an impossibility. Had calculated the weights which the columns would bear by Hodgkinson's tables, taking the thickness of metal, diameter, and height specified, assuming that the castings were good ones, and in accordance with the specification. The accident had not altered his opinion that cast iron was a treacherous material.

Mr. Poland stated that he was prepared to call two more witnesses (Mr. E. A. Gruning and Mr. H. H. Collins) in support of the evidence given by Mr. Joseph, but as he understood that Mr. Clarke was only prepared to call one witness, he (Mr. Poland) would forbear.

Mr. Clarke said he would content himself with calling only one witness, Mr. Porter, seeing that Mr. Clifton and Mr. I'Anson, whom he had intended to call, were not present.

Mr. Reid said he was prepared to call Mr. Kirkaldy to give evidence as to the strength of the ironwork; but

The jury expressed their opinion that they had heard enough about that.

Mr. Frederick William Porter, examined by Mr. Clarke, said he was an architect, practising at 16, Russell-square. He had had great experience in building, and since the day of the accident he had inspected the plans and drawings from which the new building in the Haymarket was being carried out. He had carefully examined the *débris* of the fallen buildings, and had heard the greater part of the evidence given by the various witnesses. He attributed the accident to the failure of the party-wall, and was further of opinion that the wall failed by reason of something that took place immediately before the accident. Had heard the account of the recess which had been cut into the wall on the afternoon preceding the evening of the accident. Thought that the cutting away of the wall contributed very largely towards, if it did not altogether cause, the accident. In his opinion, the appearance of the remains was inconsistent with the theory that it was the sinking of the iron stanchion that brought the whole building down; for he believed that the iron stanchion in question was almost the last part to move, instead of being the first. Supposing that the weight resting upon the stanchion had crushed the brickwork below, the crushing would have been a gradual process, and some signs of its yielding must have been shown by the cracks in the superincumbent masonry of the Haymarket front. He was of opinion that if the stanchion were the cause of the accident, the building would have fallen over towards the south-west corner, *i.e.*, towards the point on which the stanchion had rested. The subsidence of the sink in Mr. Baron's kitchen was inconsistent with the theory that the slipping of the stanchion was the cause of the accident. With respect to the ironwork, he agreed in saying that the columns were very bad, and could not help thinking that the defective character of the ironwork must have contributed to the accident to some extent.

By the Coroner.—Thought that the party-wall was the first moving part, and that its movement caused an undue strain to be put upon the iron columns. Could not say whether, if the iron had been absolutely perfect, the building would have stood. Thought that even had the ironwork been all good, the shifting of the wall might suffice to bring down the whole structure.

By Mr. Poland.—Did not mean to say that the ironwork had nothing to do with the accident, but believed that the primary cause was the failure of the party-wall. It was only an act of common prudence to plumb an old wall before building upon it. Believed that it would have been better not to have rested the iron stanchion upon a piece of the old wall, as described, but he saw nothing in the remains of the old wall which would have led him, beforehand, to say that it was an improper thing to do. Thought that the cutting into the old wall, with the weight of new wall above it, was a most imprudent thing to do, and believed that it had mainly, if not entirely, caused the building to fall. Thought that if the wall had not been cut into, the building would have been standing now. To the best of his judgment the iron stanchion came down last of all. Thought that it was pushed out by the falling *débris*, and that the old brickwork had been crushed, as described, by what fell upon it.

By Mr. Reid.—Did not suppose that any ironwork, however good, would have sufficed to keep up the superstructure after the failure of the party-wall.

By Mr. Bazalgette.—The subsidence of the sink was consistent with the theory that the accident was caused by the yielding of the party-wall.

By Mr. Clarke.—The fact that the wall had stood for three months after the addition of a great mass of superincumbent weight, and exhibited no substantial alteration, would be, in his experience, presumptive proof that it was safe. Did not believe that anything would have happened to the wall unless it had been interfered with by being cut into. If the stanchion had been the first point where the building had failed, the brickwork beneath it would have been more thoroughly crushed than at any other point; but, as a matter of fact, it was at that point that the brickwork was least crushed.

Mr. George Vulliamy, the Superintending Architect of the Metropolitan Board of Works, was re-called, and, in answer to the coroner, said he had, at the request of the Metropolitan Board of Works, carefully examined the remains of the buildings. He had also heard the evidence which had been given by the various witnesses, and from what he had seen and heard he had endeavoured to form an independent judgment as to the cause of the accident, being in no way biassed by any personal considerations in favour of or against any one particular view, his sole desire having been to form a correct judgment, to the best of his ability, on the merits of the case. In his judgment it was a very injudicious thing to tamper with the party-wall at all; it was a question, indeed, whether the old portion of the wall ought ever to have been retained,—whether it ought not to have been entirely pulled down and rebuilt, as originally contemplated and shown on Mr. Wimble's drawings. He said that because, according to some of the witnesses, the wall was considerably out of plumb, although the evidence as to the quality of the wall was conflicting, some witnesses saying it was a decent wall, others that it was a tolerably good one, and others that it was a very good one, while another witness said it was "spongy." He (Mr. Vulliamy) could not say from the remains what sort of wall it was. If it were out of plumb, it was very indiscreet indeed to use it, and to raise upon it upwards of 40 ft. of new wall. Had he been acting for an employer, he should certainly have dispensed with the old wall altogether, and pulled it down entirely, in spite of temporary inconvenience to the adjoining occupier. The deceased seemed to have been anxious that the old wall should be kept up, in order that his business should not suffer; but it did not appear that the portion of the old wall was retained merely out of deference to his representations. He (witness) knew from experience in seeing that the law was carried out in connexion with the Dangerous Structures Act, that people would use almost any amount of persuasion and cajolery in the hope of prevailing upon himself and the district surveyors to allow old and dangerous party-walls and other unsafe structures to stand; but he always turned a deaf ear to such entreaties when he had any reason to suppose that a structure was unsafe. Having, however, kept the party-wall up, and raised new work upon it, it was a most injudicious thing to cut into it as it had been cut into according to the witnesses. Had it been absolutely necessary to cut into the wall at all, a careful and prudent man, before cutting out such a large recess with hammer and chisel, would have removed a brick here and there, and thrust his hand in with the view of ascertaining whether the wall was sufficiently sound to stand the operation,—whether the mortar was loose or solid, or whether it was "trembling." Supposing that from such an examination it might be fairly inferred that the wall would bear cutting into, before commencing to cut it, it should have been shored up on either side with raking shores, which should not have been struck for a week after the new brickwork had been filled in. He could not help thinking that the cutting away of the wall was the primary cause of the accident. The iron columns were certainly very defective; but even had they been perfect they could never have borne, and were never intended to bear, the undue and improper lateral strain which must have been thrown upon them on the supposition that the first movement took place in the wall. He could hardly speak positively as to the direction which the building took in falling: it was a scientific question, involving a consideration of the composition and resolution of forces. He could not divest his mind of the idea that the cutting into the lower part of the party-wall was the primary cause of the accident. He did not think the cause was the giving way of the brickwork on which the iron stanchion referred to was bedded, seeing that the stanchion had stood for a long time—some months—without showing signs of sinking, and without the appearance of any cracks in the face of the front wall; whereas the theory that the failure of the party-wall was the cause of the accident received support from the undoubted fact that the wall had been cut into only a few hours before the buildings fell.

The Coroner, in summing up, said what the jury had to determine was how the deceased came to his death. If they determined that he came to his death by the fall of the buildings, they would have to say, if they could, what caused the houses to fall. If they were of opinion that it was caused by the using or the cutting away of the old party-wall, it would be for them to determine whether any one, and if so who, was criminally responsible.

The jury then retired, and after an absence of fifty minutes, returned into court with the following verdict:—"We find that William Baron met his death by the falling of the houses in the Haymarket, caused through building a new wall on part of a defective old party-wall, and that great blame is attributable to both the architects and the district surveyor for permitting such wall to be built upon."

The Coroner.—I presume you do not mean criminally to blame?

The Foreman.—No, sir.

Thus ended this important inquiry, which would perhaps have been more thorough, as well as more speedily got through, if the coroner could have been assisted by a professional assessor. However conscientious and painstaking a coroner may be, it is hardly to be expected that he can readily grasp all the technicalities of building brought into prominence by such an inquiry; and much time must generally be lost in getting him to understand the technical evidence. Many of those who had to attend the inquiry had reason to anathematise the defective arrangements, for not only were there no seats for solicitors, witnesses, or reporters, but even standing-space was hardly obtainable, owing to the smallness of the room. With the two windows of the room opened the ventilation was very inadequate, and it was difficult to hear the evidence; when they were shut (as they were sometimes, on account of the noise of passing traffic) the heat was insufferable and the air pestiferous. It is not creditable to the authorities that such an important inquiry should have had to be conducted amid so much discomfort,—discomfort so great that the coroner more than once bewailed it, although, as the place was put at his disposal by the parochial authorities, he was thus compelled to seem so ungracious as to "look a gift-horse in the mouth."

THE HOOGHLY FLOATING BRIDGE.

THE INSTITUTION OF CIVIL ENGINEERS.

AT the meeting on Tuesday, the 5th of March, Mr. Bateman, president, in the chair, the paper read was on "The Hooghly Floating Bridge," by Mr. Bradford Leslie, C.E.

This bridge connected Calcutta on the left with Howrah on the right bank of the Hooghly, at a short distance north of the East Indian Railway terminus. Various projects had been from time to time proposed, but ultimately the preference was given to a floating bridge, as it could be more cheaply and expeditiously constructed than a fixed bridge. The design was prepared in 1868, when it was intended to be carried out by a joint-stock company; but after much delay, in 1872 it was undertaken through the agency of the Local Government of Bengal. The work was commenced in January, 1873, and the bridge was opened for traffic in October, 1874.

The present structure was the first, and, up to this date, the only one of its kind, affording headway for river navigation. It divided the port into two sections. The lower port was occupied by sea-going ships and steamers, and the inland craft and a few coasting vessels. As, however, the graving docks were above-bridge, it was necessary that an opening should be provided for the passage of shipping. The extreme rise and fall of the tide during floods was 20 ft., and at certain seasons there was a tidal wave 6 ft. in height. The maximum velocity of the stream was six miles an hour. The depth of the river at the site of the bridge was variable, the greatest depth at low water being 6 fathoms.

The bridge was 1,530 ft. long between the abutments, and the roadway was 48 ft. wide, with footpaths each 7 ft. in width on both sides, so that the total width of the platform was 62 ft. There were four main longitudinal wrought-iron girders, at intervals of 16 ft. in the width of the roadway, raised by timber trusses, resting upon pontoons, to a convenient height above the water for accommodating the boat navigation. The platform of the bridge was level for a distance of 384 ft. on each side of the centre, at a height of 27 ft. above the water. Thence it fell by inclines of 1 in 40 to a distance of 584 ft. on each side of the centre line, where there was a length of 20 ft. of level platform 22 ft. above the water. Between these points and the abutments were the adjusting-ways, the

shore ends of which were 32 ft. above low water. The approach on the adjusting-ways was by a descent of 1 in 16 at extreme low water, and by a corresponding ascent at extreme high water; but at ordinary times it was either level or only slightly inclined. The platforms of the adjusting-ways were supported on the lower flanges of three bow-string girders, the roadway being divided into two by the centre girder. The footpaths were carried on cantilevers riveted to the outer girders. The bow-string girders weighed 66 tons each. They were 160 ft. long between the end pins on which they were hinged, and had the usual trough-shaped upper and lower members. The shore ends of the bow-string girders were suspended on links, which was preferable to carrying them on rollers, even for fixed bridges, as being less liable to get out of adjustment, and tending always to restore the girder to its normal position at its mean temperature. The outer floating ends were hinged to pivot bearings, in order to admit of a slight drift up and down stream.

The floating portion of the bridge was carried on twenty-eight pontoons, coupled together in pairs to secure stability. With the exception of the two pairs in the centre, which supported the movable sections of the bridge, each pair carried 100 ft. in length of the platform. Each pair was coupled together, at a maximum distance of 48 ft. from centre to centre, by four timber cills, bolted to the decks of the pontoons at intervals of 16 ft. These cills constituted the bottom members of the four main longitudinal trusses, the top members being the wrought-iron girders carrying the roadway. With the exception of the upper girders, the whole of these trusses were of teak. The coupled pontoons were further connected by strong horizontal and diagonal bracing of bar-iron. The timber cills and the bracing being only 4 ft. above the water, the space between the coupled pontoons was not available for navigation, and floating fenders or booms were provided to divert boats from these openings. Ordinarily the main girders overhung the pontoons 21 ft., their ends being supported by the inclined struts of the trusses, leaving a width for navigation of 42 ft., partially obstructed by the raking struts. For the convenience of the country craft, there were two rectangular openings of 60 ft. clear span between the fourth and fifth pairs of pontoons, reckoning from each abutment. The roadway over these openings was carried on eight girders, each 2¾ ft. deep, and weighing 8 tons. They rested on saddles secured to the top of the cross-bearing girders, which were suspended to the ends of the ordinary main truss-girders. All the pontoons were 160 ft. long, by 10 ft. beam, with holds varying from 8 ft. to 11 ft. in depth, according to the dead weight to be carried. Each pontoon, excepting those of the movable sections, was accurately anchored by permanent moorings, laid exactly in line with the centre of the pontoon, the distance between the up and the down stream anchors being 900 ft. The strain on the chain cables varied from 5 tons to 25 tons; their great length afforded the necessary "spring," to allow for the rise and fall of the tide, but a few links were taken in during the dry season, and slacked out again during the flood season.

The 200-ft. opening for the passage of ships was one of the most difficult problems in designing the bridge. Owing to the strength and irregular set of the stream and eddies, ships could only be moved at or near slack tide; and it was a rule that all vessels of more than 200 tons must be moved by steam against the tide. The bridge was generally opened twice a week at high water, but occasionally at low water. The opening was effected by removing the two centre sections of the bridge bodily. These sections were connected with the fixed portions of the bridge by drawbridges, which on being run back left a clearance of 20 ft. on each side of the platform of the movable sections. By means of steel warps, laid to buoys moored for the purpose, these sections were warped up stream far enough to clear the rest of the bridge. They were then disconnected and sheared over, one on each side, leaving a fair way clear of all obstructions. The bridge was closed by reversing these proceedings. The ordinary time taken in opening the bridge was fifteen minutes, and in closing it twenty minutes.

There was a daily traffic of 6,000 tons of heavy goods, which were conveyed in bullock carts, besides foot and carriage passengers. The ironwork of the pontoons weighed 1,650 tons, that of the girders 875 tons. The whole of this, as well as the mooring-chains, was sent from England, and was erected and riveted up in Calcutta. The teak timber, which weighed 1,500 tons, was procured from Burmah.

ARCHITECTS' BENEVOLENT SOCIETY.

THE annual general meeting of the Architects' Benevolent Society was held on Wednesday at the rooms of the Royal Institute of British Architects, Mr. David Mocatta in the chair, supported by Messrs. J. H. Hakewill, Horace Jones, G. Elkington, Wyatt Papworth, George Williams, J. D. Mathews, L. H. Isaacs, James Edmeston, T. Hayter Lewis, H. H. Collins, Geo. Godwin, Geo. Scamell, E. Nash, H. Saxon Snell, C. B. Thurston, E. A. Grüning, and J. Goldicutt Turner, hon. sec. Mr. G. J. J. Mair, F.S.A., treasurer, wrote to the effect that in consequence of family bereavement he was unable to be present.

The chairman read the annual report, of which the following are passages:—

"The Council desire to bring to your remembrance the substance of a few sentences uttered twelve months since. In them were summarised the facts that at the close of the year 1875 the hopes of the Society were scarcely realised, and that the finances were in so reduced a condition in 1876 that a special appeal had been determined upon and issued. The result of this appeal falls within the financial year 1877, and to which this Report relates.

The response which our professional brethren made was one gratifying to all concerned in sending out the circular of January, 1877; but the Council still considered that, having regard to the large numerical proportion the London brotherhood held over the provincial, they were inadequately represented in our ranks, and a further call was determined to be made to those in this metropolis who had not already responded; this was accordingly issued in November last.

In these two applications no less than 3,528 circulars in the former and 1,033 in the latter have been despatched, producing the following results to the Society:—74 new subscribers, 90*l.* 6s.; 49 new donors, 275*l.* 3s. 6d.; 5 old subscribers who have increased their subscriptions from 1*l.* 1s. to 2*l.* 2s. in amount, 5*l.* 5s.; 22 previous donors, who have again made benefactions to the extent of 118*l.* 17s. 6d.; or a total gain to the Society upon the year of 489*l.* 12s.

Death has told upon us with its usual unswerving hand, and has removed eight from our list, whilst other incidental causes have lost to us about nineteen more.

The cash at the bankers at the end of the year was 58*l.* 1s., as against 31*l.* 17s. 5d. in 1876, and the stock standing invested in the trustees' names 2,374*l.*, as against 2,188*l.* 15s. 11d. in 1876; this, too, has been achieved after paying all the working expenses, the costs of the two appeals, and distributing to applicants and annuitants 156*l.* more than was disbursed in the year previous.

The number of applications relieved during the past twelve months has been 27, against 21 in the previous year, and the amount distributed has, through the improved state of the funds at their disposal, enabled the council to treat each in a way more commensurate with the status in life the applicants had perhaps before occupied; thus, in 1876, the grants only worked out at the rate of about 13*l.* 15s. each, whilst in 1877 a similar test being applied gives a result of about 18*l.* 7s. 6d.

Amongst the number of those who have passed away from us during the twelve months we have to deplore the loss of the Society's first president, Sydney Smirke, R.A., and of Sir M. Digby Wyatt, M.A., who for some years has been one of the trustees. It is needless for the Council to remind you of Mr. Smirke's never-flagging zeal towards the Society, and of how courteously he took the chair up to almost the last of the general meetings; they can only add that that which was manifest to the public at general meetings he was in private at the different Council Boards. Sir M. Digby Wyatt, too, was ever ready to give his help at the Council, and his purse to the aims of the Society. You will be called upon to-day to elect successors to both these gentlemen.

The Royal Institute of British Architects has continued to lend its aid to the objects of the Society, in the substantial shape of providing accommodation for the meetings of both Council and general meetings, rent free.

In moving the adoption of the report, the Chairman said he thought it afforded much ground for congratulation, inasmuch as the result of the appeals which had been made showed the existence of a certain amount of vitality. The Society had, however, sustained a sad loss in the death of its esteemed president, Mr. Sydney Smirke, R.A.; and of its valued trustee, Sir M. Digby Wyatt.

Mr. E. Nash seconded the motion for the adoption of the report, and said that although the Society was now in a better position than it had yet occupied, nevertheless its funds were still very limited, and its operations were not nearly so extensive as they ought to be. The architects were a very numerous body,—perhaps too numerous,—and it was to be feared that in the future the Society would be called upon to render assistance far more frequently than had hitherto been the case.

The report was unanimously adopted.

The honorary secretary, Mr. J. Goldicutt Turner, read the balance-sheet, which showed that the total income on the general account for the year was 754*l.* 3s., including 9*l.* 8s. 7d. from the Pension account, 318*l.* 17s. 9d. subscriptions, 394*l.* 1s. donations, and 31*l.* 17s. 5d. balance from last year. The total expenditure was 696*l.* 3s. 9d., including 134*l.* 7s. 2d. for printing and stationery, postages, collector's poundage, and clerk's assistance; 178*l.* invested in the purchase of Stock (New Three per Cents.); and 383*l.* expended in gifts to applicants; leaving a balance in hand of 58*l.* 1s. The Pension account showed that 69*l.* 8s. 7d. dividends on Stock had been received, and 60*l.* paid in pensions. The amount of stock (New Three per Cents.) belonging to the Society is 2,374*l.*

The balance-sheet, which was duly signed by the auditors, Mr. T. E. Knightley and Mr. John S. Lee, was adopted, on the motion of the Chairman, seconded by Mr. G. Scamell.

The Chairman, in moving

"That Thomas Henry Wyatt, esq., past-president of the Royal Institute of British Architects, be elected President of the Society, in the room of Sydney Smirke, esq., R.A., deceased,"

observed that the Society could not possibly have a better president than Mr. Wyatt, whose activity, zeal, and courtesy had signalised his presidency of the Institute.

Mr. J. Edmeston seconded the motion, and expressed the opinion that the result of the appeals for aid which had been made on behalf of the Society was not quite satisfactory, seeing that only about three per cent. of the persons applied to had responded. The Society would need all the influence and aid which their new president could lend them.

The resolution was carried *nem. con.*

On the motion of the chairman, seconded by Mr. E. A. Grüning, Mr. G. E. Street, R.A., was unanimously elected one of the trustees of the Society, in the room of the late Sir Digby Wyatt.

The chairman moved that Mr. Waterhouse, A.R.A., Dr. J. S. Phené, Mr. Horace Jones, Mr. J. McVicar Anderson, and Mr. D. Mocatta be elected members of the Council, in the room of Messrs. John Gibson, T. M. Rickman, C. B. Thurston, F. W. Porter, and T. Hayter Lewis, who retired by effluxion of time.

Mr. Elkington seconded the motion, which was carried.

It was also resolved, on the motion of the chairman, seconded by Mr. Elkington, that Mr. George Williams and Mr. J. D. Mathews be elected auditors for the year 1878.

Mr. G. Fowler Jones, of York, who wrote regretting his inability to be present, was unanimously elected a corresponding member of the Council.

The officers of the Society were re-elected, and thanked for their services, a special vote of thanks being accorded to the hon. secretary, Mr. J. Goldicutt Turner.

Votes of thanks were heartily accorded to the Council of the Royal Institute of British Architects for their continued kindness in allowing the use of their rooms for the meetings of the Society; and to the Chairman, for his services in conducting the business of the meeting. It was incidentally suggested during the latter portion of the proceedings that it might be worth while to arrange for a public dinner to inaugurate the accession of the new president, and to bring the claims of the Society more prominently forward. The matter was left to the consideration of the council.

Amongst new donations were one of 3*l.* 3s. from the Worshipful Company of Dyers, and 10*l.* from Mr. Godwin.

Divided Contracts.—The recent establishment of a Builders' Exchange in Cincinnati, and the consequent increase of concert among the building trades, have led, among other things, as we have reported (says the *American Architect*), to a proposition to abolish the system of general contracts, and substitute the practice of letting out every kind of work in a building in a separate and independent contract directly to a man who is to do it. This resolution is sustained by a law that has been passed to regulate the conduct of public buildings, and there is consequently at this moment, or has just been, some confusion over a public building, which the authorities wished to let out "in the lump," unaware of the prohibition which exists. There is no doubt that the habit of giving out general contracts leads, where competition is keen, to a good many abuses. "But in private building, unless on a very large scale, there is so much advantage in the directness of responsibility and ease of superintendence due to having one contractor, whose duty it is to see that all things work together, that there is, and perhaps always will be, a very common preference for him."

OVERCROWDING IN WHITECHAPEL.

THE Medical Officer of Health here, Mr. John Liddle, whose reports are amongst the most valuable issued, again draws the attention of his Board to the subject of overcrowding, which, from the reports of the inspectors, prevails to a very great extent in this district; and not only in this, but in many other districts in London. The danger to the public health from this cause cannot be over-estimated.

It appears from the notes furnished to Mr. Liddle by the inspectors, that one cause of the overcrowding in this district is from the large immigration of foreigners, principally from Poland, who arrive here in a state bordering on destitution, and are received by their fellow-countrymen, who are not in a much better pecuniary condition; but who, nevertheless, allow them to occupy a portion of their only room, in which their own family resides, until the new comers can obtain work. The rents of the houses in many of the poor neighbourhoods, particularly those bordering on the city, are much increased, owing to such houses being in great demand. Many of them are in the possession of foreigners, who, in order to pay the advanced rent which is demanded, are compelled to crowd into each room as many as it will hold. A curious fact has been brought to light by the visits of the inspectors, viz., that the English and Irish, who formerly occupied these houses, have either been compelled to remove, or have left of their own accord in consequence of the advance of rent, although the accommodation is not improved. The result is, that they go a short distance from London and avail themselves of the early and cheap workmen's trains, or the tram-cars. It further appears, says Mr. Liddle, that the people of different nations do not harmoniously amalgamate; for we find that the English Jews, who are very numerous in this district, live together in certain localities, while the foreigners live together in other parts; the Irish are located by themselves, and so are the English.

"The question may be properly asked,—How is this state of things to be remedied? Every person, whatever his condition of life, and wherever his residence, is deeply interested in this inquiry; and it is in vain to assert that the question of overcrowding among the poor in narrow and confined places does not concern the wealthy inhabitants of cities and towns who live in well-ventilated houses, and which are surrounded by open spaces; but it, nevertheless, does concern the whole community, as is strikingly shown by the spread of many diseases which are, perhaps, in the first instance endemic, and confined to these overcrowded places, but which soon become epidemic and extend over large areas, attacking indiscriminately all classes."

Laws for the abatement of overcrowding will not suffice; and it is feared that unless the question is taken up with a spirit of love towards the poorer and more ignorant classes by the upper and middle classes, and measures adopted to give instruction to the poor in matters concerning their physical well-being, the existing state of things will long continue.

Mr. Liddle urges that voluntary societies should be formed in every district for visiting the houses of the poor.

THE ANCIENT MONUMENTS BILL.

THIS Bill has been read a second time in the House of Commons. Sir John Lubbock, in moving the second reading, said that its promoters had adopted all the improvements which were recommended by the select committee of last session. There had been two objections to the measure,—that it was unnecessary, and that it interfered with the rights of property. That it was not unnecessary was clear, as destruction was going on in many parts of England and Ireland; and as to interference with the rights of property, it did no more than railway and gas Bills did every year. But all that was desired was that those who possessed these monuments should give notice of removal and an opportunity to purchase them. But he contended that those who possessed these monuments should be the first to support the Bill. They were national heirlooms, and were not the exclusive property of the present proprietors nor of the present generation.

Mr. Plunkett moved that the Bill be read a second time that day six months, but acknowledged that the Bill was very much better than it had been in former years. But the machinery of the Bill was not required, and a schedule should be made of the monuments which were in want of preservation.

Mr. Raikes said that the Bill had been before a select committee, but was still open to the original objection as to the mode in which its provisions were to be enforced, viz., by giving extraordinary powers to a commission of private persons. He complained that any man who had an ancient monument on his property was, under the Bill, to write himself down as an enemy to the public and desirous of injuring that monument. If, however, the compulsory clauses were struck out of the Bill he would vote for the second reading.

Mr. Herschell hoped that the hon. baronet would not accept the proposition of the hon. member opposite, as if he did the Bill would certainly be inoperative.

Lord H. Thynne opposed the Bill, which he considered was more calculated to cause the destruction of monuments than to preserve them. The preservation of ancient monuments ought to be placed in the hands of the county authorities instead of individuals, as proposed by the Bill. It was not only a most confiscatory, but a most extravagant measure.

Mr. S. Lefevre referred to the destruction of Cæsar's Camp at Wimbledon, by the owner, although the people of London were willing to give him the full value of the ground, and said if a Bill of this kind had been law that most valuable relic of antiquity would have been preserved.

On a division, the numbers voting for the second reading were 64, against 56, leaving a majority of eight in favour of the second reading. The Bill was accordingly read a second time, and was ordered to be committed.

THE SCHOOLS OF THE ART DEPARTMENT.

SIR,—At the risk of being included in the category of that half-dozen cranky dissentients from the opinion of Sir Henry Cole, I venture to affirm that in his address at Manchester he entirely begs the question at issue. The real question is not whether the Department schools have done some good, but whether much greater good could not have been done by a very different application of those large sums of money which have been expended on their establishment and maintenance?

What is our aim? Is it to rival that pitch of art development which was attained in Greece and Italy, or some lower standard? If the former, would not the common-sense procedure be to inquire how that pitch of excellence was arrived at? And if we do inquire we find that it was attained by totally different means to those employed by the Science and Art Department. The ruling classes in Greece and Italy were practical; they spent what could be spared from the public funds for the encouragement and development of art in raising grand monumental edifices, and in embellishing these with painting and sculpture. They took the most direct means of cultivating art by employing artists on public works of great extent and magnificence. Every public building became a first-rate school of art. The leading artists had their scholars. These schools were of the most valuable kind. For in thoroughly carrying out the decorations of a great public building, the scholars learnt that most valuable lesson in art-education, viz., the adaptation of art to the various parts of a great whole. These ancient schools did make designers, whereas Sir Henry Cole confesses his schools do not. The Greeks and the Italians never dreamt of founding an art department and provincial art schools, and of standing aside to look on, with closed pockets, in the expectancy of a great art epoch proceeding from such means. The Greeks and the Italians knew that all that they desired would come out of a persistent and liberal demand on the exercise of artistic talent. The first grand essential towards a great art development is the existence of good taste in the upper classes, and the schools of the Department do not touch this class. A true taste for art really proceeds from a right kind of intellectual training, not from studying examples of art. Italy, as we have frequently had occasion to point out, was for centuries throughout its length and breadth one vast museum of the fine arts, without its art-treasures having the slightest power to arrest the decadence of art or to revive it. We seem to think that art makes civilisation, whereas history teaches us the very reverse. Art and literature are the most durable records of a nation's intellectual status; by their fragments a nation is judged by posterity.

Drawing should doubtless form an important item in education, as I pointed out before the "footings" of South Kensington were laid, not for the purpose of art-culture, but of technical training, because drawing is the best means of training the eye to correct observation, and the hand to dexterity in touch. The School Board Schools should be the great nurseries of technical skill. What the Science and Art Department have not effected may be gathered from the furnishing of private houses, and the contents of bric-à-brac shops, from both of which examples of the highest kind of taste are almost invariably absent. In fact, if you scratch the British taste of the present day with the scalpel of reason, you shall find the Tartar, "Inconsistency."

W. CAVE THOMAS.

ELLISSEN *v.* LAWRIE.

SIR,—My attention has only just been drawn to the report published in your issue of the 23rd ult. of the above case, which contained only the *ex parte* statement of the plaintiff's counsel. No evidence was taken except that of the plaintiff himself, which went absolutely to negative this statement. The plaintiff's counsel, after hearing his own client's evidence, probably thinking "discretion the better part of valour," acceded to the suggestion of the judge (made before the trial commenced), that the matter was one which should be referred to a barrister, assisted by a scientific assessor. This course was adopted against my wish. As I have a complete answer to the action, I must ask you to publish this letter, setting forth the above facts.

T. LAWRIE, F.R.I.B.A.

TRADE MATTERS.

IN reply to "Nemo," in yours of the 23rd ult., I am afraid he did not choose a branch of the building trade, such as a carpenter, bricklayer, or mason, but wished his son to be a pupil. If so, the premiums were small, as the lad would waste a good deal of the valuable time of foremen and others; and I have generally found, on the expiration of the articles, the pupils were half clerk and half joiner, but knew nothing well enough to get a living.

Some builders send the pupil as clerk to the foreman on the building, thus saving a clerk; but, on completion of his articles, the lad is neither a foreman nor a clerk, and if he succeeds he finds every day the want of that technical and practical knowledge an apprenticeship at the bench or banker can alone supply; but in too many cases *gentility* prevents the lad having this early training.

A CLERK OF WORKS.

THE SHEFFIELD BOROUGH SURVEYOR.

SIR,—A great injustice has been done the borough surveyor of Sheffield. He has been given three months' notice to quit his appointment on the finding of a secret committee, without having been given an opportunity of meeting the charges brought against him. The case is so bad a one, that, in the interest of every municipal surveyor in the country, it should be laid before the public in its true light. Will you ask for some explanation of the unfair act committed by the corporation, as reported in the *Sheffield Daily Telegraph* of the 14th ult.?

E. B. ELLICE-CLARK.

REBUILDING THE NORWOOD INDUSTRIAL SCHOOLS.

THE Lambeth Guardians have resolved upon the entire reconstruction of the Industrial Schools at Norwood, and from the statements made at the last meeting of the Board, when the subject was under consideration, the decision of the guardians to rebuild the establishment is by no means premature. It was stated that at the present time no less than 100 children in the schools are compelled to sleep in a wooden building of a primitive character, the only approach to it from the outside being wooden steps, and that in the event of a fire occurring many lives would doubtless be sacrificed.

PENALTIES AGAINST THE SOUTHWARK AND VAUXHALL WATER COMPANY.

CUTTING OFF THE SUPPLY.

THE Southwark and Vauxhall Water Company have just been mulcted in heavy penalties for illegally cutting off the supply of a respectable tradesman in the Borough. Last week, the company were summoned before Mr. Partridge, the Southwark police magistrate, by Mr. J. Bolton Ladbury, a draper, in High-street, Borough, for having refused to supply him with water, and cut off the pipes under the following circumstances:—It appears that for several years past Mr. Ladbury has paid seven guineas a year for his water, but that last year he received notice that the rate would be increased to 16*l.* 5s., although there had been no increase in his consumption of water. On his remonstrating with the company, the rate was reduced from 16*l.* 5s. to 11*l.*, and on the 11th of last month he received a notice demanding 5*l.* 10s., being two quarters' rent. In answer to this notice he forwarded a cheque for the amount, which was returned as "not being drawn for the correct amount," and on the 27th of February the company cut off the water, and he was without a supply for four days, although there were ten persons in the house.

The Company's defence was that the returning of Mr. Ladbury's cheque, and the subsequent cutting off the supply, were owing to a mistake; but Mr. Partridge, the magistrate, in giving his decision, said that although the mistake might be inconvenient for the company, neither the public nor the complainant must be damnified by the error of any officer in the water company's service. According to the evidence, there were ten persons who had been deprived of a supply of water for four days. "Now," said the magistrate, "it does seem to me that it is a very serious thing indeed, because in this case the water company have a monopoly. I do not know whether any other persons supply water within the district; but, at any rate, this is the Southwark and Vauxhall Water Company, therefore I suppose the public in this district draw their supplies chiefly from that company. It does seem to me a very serious thing, in a sanitary point of view, for a water company to deprive the inhabitants of a full and efficient supply of water, which seems to me as necessary as the air we breathe, for the purpose of health and in the interest of the public generally. It is no answer to say that one of the company's officials has been in error; they must suffer for their error; therefore I must impose the penalty of 10*l.*, and also award the sum of 40s. a day for four days. I see no reason in such a case as this, where there is a monopoly, and where the public require and are entitled to, and pay a high price for, their water, why there should not be a full and efficient supply."

PROPOSED CONVERSION OF LAMBETH OLD WORKHOUSE.

SINCE the opening of the new Lambeth Workhouse, about three years ago, the old building in Princes-road has been unoccupied, and the Guardians have had under consideration the propriety of disposing of the property. They have now the chance of carrying out this object, Miss Elliott, a lady residing in Cornwall-gardens, Queen's-gate, having written to the Board stating that she is desirous of purchasing the building for the purpose of adapting it as a home for needy and necessitous persons. Miss Elliott's offer is at present under the consideration of the Guardians.

Reredos, Sidmouth.—The new reredos at All Saints' Church, Sidmouth, has been unveiled. It is composed of finely-grained Corsham stone, and its central part consists of three panels, the middle one being cinque-foiled. In its recess it is diapered, and upon the diaper is a raised ribbon, bearing the injunction, "This do in remembrance of Me." On either side are triple-headed panels, in which are carved the wheat and the vine. The flanks of the reredos proper are diapered with ornament of geometrical form. In the centre of these panels occur the Alpha and Omega, in unbroken circles. A bold and deeply-moulded cornice runs the entire length of the upper portion. The work has been carried out by Mr. Harry Hems.

MYCENÆ.

MR. A. S. MURRAY, a letter from whom we inserted in our last with reference to an article by Dr. Lindenschmidt, a translation of which we published, complains further that the translation contains "offensive expressions which have no equivalent in the German." Mr. Murray mentions particularly that the words "a contemptible criticism" (p. 212) should have been *a contemptuous criticism*. Without stopping to say, in excuse for the translator, that in more than one German dictionary looked into the word "contemptible" appears in the list of meanings given to the German word used, we unhesitatingly express our great regret in respect of the slightest error of the kind that may have been committed. The translation came to us from what we considered a perfectly reliable source, and was made without a shadow of *animus* by one who knows nothing whatever of the parties concerned. We in like spirit printed it simply that our readers might know what was being said on the subject in Germany.

THE NEW GRAND HOTEL.

MESSRS. MERRITT & ASHBY, the contractors for the new Grand Hotel, which is about to be erected on the vacant land between Northumberland-avenue and Northumberland-street, opposite Trafalgar-square, have entered upon the work by enclosing the site with lofty hoardings fronting Charing-cross and the Strand, and Northumberland-street and Northumberland-avenue on the east and west. A substantial footway, enclosed by railings, has also been constructed immediately in front of the Charing-cross hoarding. The contract for the superstructure is 103,900*l.* This is independently of the cost incurred in the excavations and foundation-walls, which were executed by Mr. Reddin, and which are said to have involved an outlay of more than 10,000*l.* There were several tenders for the work which Messrs. Merritt & Ashby are about to carry out, the highest being a little more than 112,000*l.* It is stated that with the exception of the St. Pancras Hotel, belonging to the Midland Railway Company, the Grand Hotel will be the largest and most costly hotel in the metropolis. We understand that Messrs. Merritt & Ashby's contract is exclusive of the internal decorations, which are intended to be of the most elaborate character. Notwithstanding the size and magnitude of the hotel, it is expected that the building will be ready for covering in during the present year.

PROGRESS OF BUILDING AT PENGE.

A DISCUSSION which took place at last week's Penge Vestry meeting is illustrative of the rapid progress of building in that locality. Mr. Dodson, one of the members, drew attention to the desirability of forming a recreation-ground for the benefit of the inhabitants, and in the course of his remarks he said it seemed to him that the hamlet was now increasing so fast that in a very few years there would not be an acre of open space in the district. He, therefore, wished the Vestry to consider the matter, and, if necessary, to elect a committee, whose duty it would be to solicit funds, and to make an inspection of the various plots of ground in the hamlet, with the view of selecting one to be laid out for recreation purposes. The proposition was unanimously adopted, and a committee was formed to carry out the object.

The Proposed Asylum at Darenth.—At a late meeting of the Metropolitan Asylums Board, Sir E. H. Currie moved that the general ground-plan for the proposed adult asylum at Darenth, laid on the table, and which had been posted at the offices in Norfolk-street during the previous fortnight for inspection, be approved; that the same be sent to the Local Government Board, with a request for authority to raise a sum of 50,000*l.* on loan, for the purpose of carrying out the works. The buildings would cost 52,500*l.*, and it was proposed to accommodate altogether, if necessary, 1,596 persons. The motion was carried, as also was a subsequent proposal, that Messrs. Harston, the architects, receive 3½ per cent. commission on the whole undertaking, the same to be paid as the work proceeds.

SANITARY WORKS.

THE following statement of sanitary works devised and carried out for the improvement of the dock offices at Hull, by Mr. F. Hoole, of London, may prove suggestive to others:—

All internal waste water-pipes and soil-pipes were tested, and many leakages made sound. The soil-pipes were carried up above the roof, and their lower ends cut off from old drains, and, being carried through the walls, were taken into well-ventilated manholes built under the street pavement.

All foul drainage was diverted from the drains under the building, and the rain-water from down-pipes only allowed to run through them. These drains were well ventilated and trapped at their outlet. New drains well ventilated and trapped also at the outlet, were laid outside the building to take the foul drainage to the sewer, and the w.c.s were removed from the internal courtyard and placed outside the building.

A new inlet has been formed for the supply of fresh air to the heating chamber, and the iron-heating surfaces covered with glazed brick and Portland cement, so as to prevent the air from being scorched. Ventilators have been also put in nearly every window throughout the building, and vertical tube-ventilators in some of the principal rooms.

The chairman of the Hull Docks, Sir William Wright, states that the dock offices are now wholesome, whereas, previously they were most unwholesome and dangerous to health.

FALL OF IRON ROOF.

ANOTHER example of the insecurity of iron construction, as it is commonly used, is the fall of a roof in Cambridge, Mass. The *American Architect* says:—"The iron roof over the furnace-room of the New England Glass Works fell down suddenly without warning. It was 100 ft. long, and 90 ft. in span, put up seventeen years ago, and has lasted perhaps as long as with our present habits of construction any piece of ordinary iron-work can be expected to refrain from falling. Fortunately no one was under it, and since nobody was hurt, it is not likely that any great notice will be taken of the accident; but it is none the less a warning. The theories behind which ignorance takes refuge to avoid confession are fairly instanced in that which has been put forward in this case, viz., that the furnaces being out for some weeks, the iron girders (or trusses) had so contracted with the cold as to draw away from their bearings. A rough computation is enough to show the absurdity of such a supposition."

THE ATKINSON ART GALLERY AND FREE LIBRARY, SOUTHPORT.

THE new Atkinson Free Public Library and Art Gallery, which was presented to the town of Southport by Mr. William Atkinson, J.P., Deputy-Lieutenant for Cheshire, was opened on the 21st ult.

The building is in the composite Italian style, and is from the design of Messrs. Waddington & Son, architects, Burnley. There is a pediment in front, which contains a series of bas-reliefs representative of Homer as the genius of poetry, Æschylus of the drama, Thucydides of history, Apelles of painting, Phidias of sculpture, and Ictinus of architecture. Over the entrance there is a medallion of Inspiration, represented as a young girl. The sculpture is the work of Mr. G. W. Seale, of London. It is intended to fill in a space directly above the pediment, which at present is blank, with a group of figures, representing Inspiration surrounded by figures typical of the fine arts, literature, and commerce. The building is faced with Longridge stone, the back and side elevations being of brick, with stone dressings. The entrance-hall has a tesselated pavement in red and black, and leads into a lofty vestibule 12 ft. wide, where there is provided access to rooms which will serve as reading and news rooms. At the end of the vestibule is the library, with a circular counter on the same principle as that at the British Museum. The general reading-room at the left is the larger of the two, and is intended to be used as a lecture-room, it having a length of 63 ft. by 24 ft. The book-shelving in the library has been arranged to hold 40,000 volumes, although the space could be made available for many more if this were requisite. Both rooms are ventilated by upright fresh-air flues, the foul air being carried off by means of Pott's system of cornice ventilation. The place will be heated by hot-water pipes, in coils. All the upper rooms are devoted to the exhibition of works of art. There are three galleries in all, the main gallery being 67 ft. 6 in. by 26 ft. 9 in., and the other two 44 ft. by 25 ft. 9 in. each.

Two galleries are also provided for sculpture, each 21 ft. 9 in. by 18 ft. The lighting in these rooms is from the roof. The total wall-space available for hanging is 6,000 ft. The ceilings of the galleries are coved, and constructed in plaster, with plain guilloche ornaments.

The cost to Mr. Atkinson has been 8,000*l.* He was deservedly thanked by the Corporation for his sensible munificence; and again at the banquet which took place in the evening, when Mr. Councillor Picton, of Liverpool, said that the centre of all names that night was Mr. Atkinson's, and he could not mention that name without respect. They had heard a good deal of the progress of Southport, and, for his part, he thought that they would soon have occasion to institute a local Walhalla for the men who did so much for the town. The streets of Southport were a matter of envy, for those in Liverpool had been made in a crooked narrow style many years ago, and had been built much on the same plan since. In Southport, however, they had been fortunate enough to have such a fine street as Lord-street laid out at an early period of the town's existence, and that had served as a pattern for the rest of the streets which had since been built.

CENTRAL ASSOCIATION OF THE MASTER BUILDERS OF LONDON.

THE Committee just appointed for the current year held their first meeting at their offices on Tuesday, the 12th inst., at which it was resolved to issue the following circular to the members of the Association:—

"The committee appointed at the general meeting of the Association, on the 28th of February, have (on their first assembling) great satisfaction in finding that the strike of the Union Masons may be considered as virtually at an end. Every member of this Association is now supplied with as many masons as he requires, at or below the old rate of 9d. per hour.

The masons' strike committee has announced that any of the members of the union may now go to work at 9½d instead of 10d. as demanded, and seems to have abandoned altogether the demand for a reduction of the hours of labour.

It has, moreover, been intimated that if the unionists are unable to obtain 9½ per hour, they will probably be prepared to accept the old wages of 9d. While congratulating the members of this Association on the collapse of the Masons' Strike of 1877, the committee are very anxious to impress on the builders of London the necessity and justice of giving every support to the masons of all nationalities who are now employed by them. It has been the frequent boast of the masons' union that, as soon as the strike should be over, the members of the union would go back to work and oust the non-unionists from their employ. The masters' committee would regret very much that the unionists should be able in any instance to carry out this threat, and beg leave to caution the trade generally against the machinations (whether of foremen or others) which may be used towards this end. It will be a bare act of justice to retain all the masons now working, paying them the full value of their labour.

The Committee trust that the result of this struggle will be to abolish the rule of a uniform minimum rate of wages, and to promote a perfect freedom of contract between masters and journeymen as to wages and overtime, piece-work, and other matters, independent of the arbitrary and pernicious interference of shop-stewards and other trade union officers."

SCHOOL BOARD SCHOOLS.

Tetsworth (*Oxon*).—New Board schools for 100 children, with teacher's residence, are about to be commenced at this village from the designs of Mr. Arthur Vernon, architect, High Wycombe.

Beacon's Bottom (*Oxon*).—A new Board school, to accommodate seventy infants, has just been opened at this village. Mr. Wells, of Thame, was the builder, and the architect was Mr. Arthur Vernon, of High Wycombe.

Books Received.

The Dickens Dictionary. By GILBERT A. PIERCE, with additions by WILLIAM A. WHEELER. London: Chapman & Hall.

So thoroughly have the writings of Charles Dickens been absorbed into our national life, that facility of reference to them has become a necessity. His characters are as real to us as those of history: his phrases give point and flavour to our daily conversation, and thus ignorance of Dickens places a man at a great disadvantage. But the quantity he has left us makes it extremely difficult to find what is wanted at the moment, to assign allusions to the proper works, or to verify quotations. Hence something like that which has been done for Shakspeare, Milton, Pope, and Tennyson in the way of a concordance is needed, and that need is supplied to an extent in the book before us.

A concordance to Dickens would be so big an affair that probably it will never be undertaken. We cannot look for anything like an index to lines or phrases: a "key to the character of principal incidents" was all that was practicable, and for that we are grateful. There is significance in the fact that we owe even this to America. Our great humourist is, if possible, more popular in the United States than in his own country. He has long been published there in a very cheap form, and has circulated among the millions, and thus his name has become in a marked sense a "household word" there, and what he has written is familiar to everybody. Popularity like this justifies such a work as the "Dickens Dictionary," which has had a circulation amply repaying the authors for their labour of love. We in England get it a little late; but with the advantage of correction and revision greatly enhancing its value.

In a preface specially written for the English edition, the son of Charles Dickens, who has revised the work, expresses "a very favourable opinion of the singularly painstaking and careful manner in which it has been carried out." This, on the whole, we cordially endorse. It is a useful book exceedingly well done. More than this, it is an interesting book; for the authors have found it well within the dictionary scope to give outlines of the famous tales, and such extracts in support of them, that those who come to consult the volume will find themselves beguiled into much pleasant reading, and find it difficult to stop.

Of course, there are defects. It was inevitable that there should be omissions, though it is only fair to say that these are few. We have noted in passing, the absence of the name of Mr. Abel, the old bachelor in the "Old Curiosity Shop"; that of Mr. Grannett, the overseer of the workhouse, and Slout, master of the workhouse, in "Oliver Twist." Allusion might have been made to Mrs Corney's cats and dogs, Betsy Trotwood's donkey ("David Copperfield"), and so on. Another defect of the book as addressed to English readers is noteworthy. For all practical purposes, the early chapters of "Master Humphrey's Clock,"—among the most charming works Dickens ever executed,—have ceased to exist. The author was ill-advised, and cut them out, so that in no collected edition of his works will there be found any trace of them. In the American edition of Dickens, this lost matter is retained, and therefore reference to it forms naturally an integral part of the "Dictionary"; but is it not somewhat anomalous that while Messrs. Chapman & Hall hold themselves bound by the author's decision to suppress the clock machinery in every edition of Dickens, they should retain all that refers to it in what is designed as a key to those editions? Readers of this generation know nothing whatever of that which is lapsed and gone, but allusion to which is given, as a matter of course, to their extreme bewilderment.

This leads us to another point. The "Dictionary" references are to chapters, and this would seem to be a natural and useful arrangement. Reference to pages would necessitate consulting special editions: reference to pages no doubt struck the authors as absolutely satisfactory. Unfortunately they had not the "Illustrated Library Edition" before them, or their complacency would have received a shock. In that costly edition, not only are the page head-lines so carefully prepared by the author for the "Charles Dickens' Edition" omitted,—though these ought to be regarded as being as much part of the text as the rest of the page,—but the very chaptering has been altered, so that each volume may commence with "Chapter I." For example, the first volume of "David Copperfield" ends with chapter twenty-nine, and, properly, the second volume should begin "Chapter XXX.," but a re-numbering is, in fact, commenced which throws out all the rest of the chapters; and to make the "Dictionary" fit this edition every allusion to any character or incident after the twenty-ninth chapter ought to be altered with a pen! This would be terrible work, and we put it whether in preparing the book for the English reader cognisance ought not to have been taken of this eccentric edition?

These are points not to be disregarded in looking at the book from a critical point of view. They do not, however, materially affect its value in the hands of the ordinary reader, and undoubtedly it ought to find a place in the library of every student of Dickens. Popular as he is, people are constantly misquoting him, and nothing is more common than to find authors assigning the character of one work to the pages of another. It was probably the printer who made a writer in the *Examiner* a few weeks ago allude to Mrs. Fox, when he obviously meant Miss Tox in "Dombey & Son;" but errors as glaring are often perpetrated in the papers from sheer ignorance. A writer with the "Dickens Dictionary" at his elbow could set himself right on every detail in a moment, and with a high sense of the value in this as in many other respects we confidently recommend it.

VARIORUM.

UNDER the title of "Trade Unionism and its Results" (Lockwood & Co.), Sir Edmund Beckett has republished his five letters to the *Times*, with additions. It is a very important contribution to the consideration of the subject, and ought to have a wide circulation.——"Boiler and Factory Chimneys, their Draught, Power, and Stability," by Robt. Wilson, A.I.C.E. (Lockwood & Co.), is a valuable little book, to which we must endeavour to give further attention before long.——The first number of *Social Notes* (Hardwicke) is a good one. It includes Notes on Strikes, by Mr. F. R. Conder; On Abstinence, by Dr. Farrer; On Industrial Schools, by Mr. Sopwith; Bare Walls in Churches, by Dr. Irons; The Costs of Funerals, by Mr. S. C. Hall,—and all for a penny!

Miscellanea.

London Commercial Building Society.—The fourteenth annual meeting of this society was held at Doughty Hall, Bedford-row, on the 20th ult. The chair was taken by Mr. W. Hurran. The report and accounts showed that the receipts for the year amounted to 27,258*l.* 18s. 4d.; advances on mortgage, 8,615*l.*; deposits received, 11,704*l.* 11s. 5d. The net profit of the year's transactions was 971*l.* 19s. 3d., of which a dividend of six per cent. would absorb 913*l.* 6s. The Chairman, in moving the adoption of the report and statement of accounts, congratulated the members on the continued success of the society, there having been an increase in almost every department of the business. He feared that the members and the public generally were not aware of the advantages offered by the deposit bank in connexion with the society. He did not know how it was possible for a depositor in an incorporated building society to lose his money, since the society was only allowed to receive on loan an amount equal to two-thirds of the sum advanced on mortgage. He wished to impress upon small tradesmen the advantage of keeping a banking account, however small, on which they would receive five per cent. interest, and have the facility of making their payments by cheques.

The Houses in Hyde Park.—Sir Charles Dilke, in the House of Commons, asked the First Commissioner of Works, in reference to a statement made by him last year as to the erection of a house in Hyde Park, if he would further explain what was the purpose to which a second house now being built in the same portion of the park would be applied.—Mr. Noel said, in answer to the question of the hon. baronet, I have to state that the second house to which he alludes is no fresh encroachment on the park. Last year I asked the House to vote 500*l.* to pull down and replace the old storehouses in Hyde Park, which were in a most dilapidated condition, and totally unfit to hold the implements used in the cultivation of the park. This house, which is to replace the old store, is built on the identical site, and is no encroachment whatever.

Wycombe Marsh, Bucks.—New schoolrooms, to serve also as a workmen's institute, have been added to the Baptist Chapel in this village, and have been recently opened. The gift of the ground by Sir Philip Rose, bart., and many liberal contributions, have enabled the committee to carry out their enterprise quickly and successfully. The rooms are of brick and slate, in Early English style, and include a large reading-room on the ground-floor, and two class-rooms over, with convenient yard and range of out-buildings. The work has been completed by Mr. B. Taylor, builder, from the plans of Mr. Arthur Vernon, architect.

Fall of Buildings at Woolwich Dockyard.—A serious accident has occurred at Woolwich Dockyard, about thirty workmen being injured,—some, it is feared, without hope of recovery. When the War Department resolved, about a month since, to create a large reserve of victualling stores at Woolwich, instructions were sent to the Works Department to provide the necessary accommodation, and a contract was forthwith entered into with Mr. George Shaw, of Westminster, for the erection at the dockyard of sufficient warehouses on a site having 175 ft. frontage on the north side, by about 190 ft. in depth. This the contractor undertook to cover with a timber-built shed or sheds, roofed with glass and zinc, before the 31st of March. The building made rapid progress, but at half-past ten on Wednesday morning, the whole of the structure heeled over towards the south, and fell with a crash. An official inquiry was held at the Dockyard in the afternoon by Colonel J. H. Smith, R.E., Assistant Director of Works. The result did not transpire, but the accident is said to have been caused by the insecurity of the foundations and the neglect to provide proper struts and braces to hold the building together until completed. The damage is estimated at 2,000*l.*; but it is understood that the contractor will deny his responsibility, as he was working according to the specification and drawings of the Royal Engineers. The Engineers, on the other hand, contend that a builder is bound to take due precaution to prevent his work tumbling down.

All Saints' Church, Lambeth.—Replying to Mr. Cowper-Temple, in the House of Commons, Sir J. M'Garel-Hogg said,—On the 9th of May, 1876, an accident occurred in consequence of a portion of the stonework of the tower of All Saints' Church, Lower-marsh, Lambeth, falling to the ground, and the structure was afterwards reported as in a dangerous state, and the Metropolitan Board of Works incurred an expenditure of upwards of 100*l.* in executing the necessary repairs. Churches are expressly included within the Metropolitan Building Act, 1855, as "public buildings," and by the 73rd section of the Act of Parliament all expenses incurred by the Board in respect of any dangerous structure are to be paid by the owner of the building. On May 10, 1877, the magistrate at the Lambeth Police-court, after hearing the case, made an order upon the vicar for payment of 105*l.* 19s. 5d. and costs, and the Board has been advised that, as owner of the fabric, the vicar is personally liable to make the payment; but, in order that the question may be decided by the Superior Court, the Board, instead of requiring a distress warrant to issue in a summary manner, directed further proceedings to be taken in order to ascertain whether the vicar is personally liable. Until such liability is established by the Courts, it is not the intention of the Board to enforce the order of the magistrate.

The Temple Buildings.—In reference to a statement made in the *Builder* for the 23rd ult., as on the authority of Mr. Booth's manager, that all the masons required on these buildings had long since been obtained, and eight or ten applications per day were being made for work, Mr. G. W. Booth last week wrote (p. 252) impugning the accuracy of the statement. We are now informed that the statement made to us, though correct in one sense, needed qualifying, inasmuch as *superior* masons are still in demand on the works, and we willingly say so. We understand that in order to expedite the works arrangements are being made to have a quantity of the masonry worked at Portland.

The Masons' Strike.—Mr. Charles Goolder, secretary of the Central Association of the Master Builders of London, writes:—"There seems to be an impression in some quarters that the differences between the master builders and the masons have been settled by a compromise, whereby the latter are to be paid 9½d. per hour. I beg to inform you that no such compromise has taken place; the masters' shops have been filled with good masons at 9d. per hour, at which rate of wages there is any number of masons to be obtained. I can find no firms requiring masons; if there are any such, they have only to apply to the Central Association of Master Builders."

Winchester.—Mr. Robert James Piper, of Dewsbury, has been appointed Assistant City Surveyor of Winchester. There were 103 applicants for the appointment.

National Portrait Gallery.—In a vigorous speech, Mr. Beresford Hope, in calling attention (in the House of Commons) to the present condition of the National Portrait Gallery at South Kensington, complained that the Treasury had broken faith with the trustees, and had condemned them to put their pictures in temporary buildings in which there was no adequate means for their display or their protection from fire. Colonel Stanley (secretary to the Treasury) admitted that the present accommodation was very defective, and promised to afford some relief by giving up to the trustees the portion under the present gallery in the eastern block of the south range of buildings. This would double the present accommodation, but he questioned whether it would meet all the claims likely to be made upon it in the future. At all events, it could be done at once, and he promised that it should. Mr. Beresford-Hope accepted the promise of the secretary to the Treasury, and withdrew a motion he had proposed.

Stephens's Parquet Stains.—Mr. Stephens, whose stains of various kinds are universally known, has introduced some so much stronger that patterns may be produced by them on floors and dados without "running," and with very agreeable effect. An ordinary workman can in a few days cover the floor of a room of medium size with an effective pattern by applying the stains according to some satisfactory design, and an extensive variety of effect can be obtained by mixing the stains in various proportions, and also by diluting them to produce lighter shades. After staining, the floor should be sized, and can be finished by varnishing, or by polishing with French polish or beeswax. The manufacturer recommends laying round a room a border of thin deal boards to a width of from 6 in. to 2 ft., so that the irregularities occasioned by the windows and fitted furniture may be brought within the "parquet" border, and a straight-sided space obtained for the carpet, which will then rest upon the edge (bevelled to meet the floor) of the border.

Fall of Wall.—On Tuesday morning three men, who had sustained serious injuries by the fall of a party-wall at Camberwell, were admitted to St. Thomas's Hospital. A number of workmen were engaged on a scaffold 25 ft. high, in forming a concrete party-wall at the side of a new building in course of erection in Westmoreland-street, Southampton-street, Camberwell, when one of them noticed that the wall was bulging, and immediately the whole mass fell, carrying with it the scaffolding and the men who were at work.

Testimonial. — Last week Mr. Wright, the late manager of Mr. Whiteley's Building Department, Queen's-road, Bayswater, was presented by some of the *employés* with a handsome testimonial of respect and esteem.

The Earl's Court Railway Station.—In our account of the new Earl's Court Railway Station, which appeared in the *Builder* of February 16, there is a typographical error which we are desirous to correct. It is stated that "30,000 tons" of Portland cement were used in the construction of the walls. It should have read "30,000 bushels."

TENDERS

For new centre block, Royal Free Hospital, Gray's-inn-road. Mr. William Harvey, architect. Quantities by Mr. H. Smith:—

Shepherd (accepted)	£8,050 0 0

For the Constable-street school, of the Kingston-upon-Hull School Board, for 750 children. Messrs. W. Botterill & Son, architects. Quantities supplied:—

Grasby	£7,970 0 0
Jackson & Son	7,881 0 0
Hockney & Liggins	7,800 0 0
Brown	7,777 0 0
Habbershaw & Son	7,706 15 0
Skinner	7,701 0 0
Sergeant	7,470 0 0
Musgrave	7,622 0 0
Stamp (accepted)	7,609 0 0

For the erection of a house, Hamstead-road, Handsworth, Birmingham, for Mr. T. Marsh. Mr. John P. Osborne, architect. Quantities supplied:—

Rhodes	£1,053 0 0
Elvins	895 0 0
Taylor	890 0 0
Simons	875 0 0
Edwards	873 15 0
Jeynes	870 0 0
Lee (accepted)	845 0 0

For alterations to "The Cricketers," Greenwich. Messrs. Thomson & Sandilands, architects:—

Jerrard	£597 0 0
White	470 0 0
Disney (accepted)	370 0 0

For the erection of new bank premises at Cannock, for the Staffordshire Joint-Stock Banking Company, Limited. Mr. Samuel Loxton, architect. Quantities by the architect:—

Jones	£4,150 0 0
Whittome	3,531 0 0
Hall	3,366 13 4
Bethel	3,316 0 0
Biddle	3,210 0 0
Evans	3,418 16 0
Wiley & Filkin	3,140 0 0
Brewer & Son	3,107 0 0
Crisp & Son	2,955 0 0
Tatlow	2,740 0 0

For the erection of two shops and business premises, in Park-road, Hockley, Birmingham, for Mr. Edward Arch. Mr. John P. Osborne, architect. Quantities supplied:—

Lee	£1,312 0 0
Rhodes	1,295 0 0
Taylor (accepted)	1,194 0 0
Hulbert	1,191 1 3½

For alterations and additions to 56, Chapel-street, N.W., for Mr. George Earley. Messrs. J. Saville & Son, architects. Quantities supplied:—

Smeed	£897 0 0
Roberts	895 0 0
Braid & Co.	768 0 0
Nightingale	763 0 0
Wicks	730 0 0
Hawkes	722 0 0
Gann	700 0 0
Temple & Forster	684 0 0
Smith	673 0 0

For wood-framed barn, cart-shed, and granary over, at Westham, near Basingstoke, for Mr. S. Peters. Mr. James Gibson, architect. Quantities supplied:—

Stone	£691 0 0
Sims	575 0 0
Pike	554 10 0
Fielder & Sons	550 0 0
Walter	540 0 0
Henderson	530 0 0
Talbot	520 0 0
Goodall	506 8 0
Sadler	501 10 0
G. Batten	495 0 0
Tigwell	487 10 6
W. W. Batten (accepted)	469 0 0

For clothing factory, Basingstoke, for Messrs. Gerrish & Ames. Mr. James Gibson, architect. Quantities supplied:—

	Part Basement.	Whole Basement.
Prout	£1,963 0	£2,167 0 0
Parker & Evans	1,784 0	1,933 4 0
Jones & Co.	1,740 0	1,873 0 0
Fielder & Sons	1,657 0	1,788 0 0
Bishop	1,643 4	1,758 0 0
Smith	1,549 0	1,663 13 0
Goodall	1,534 8	1,660 6 0
Simmons	1,530 0	1,644 0 0
Sims	1,496 0	1,638 9 0
Musselwhite	1,529 0	1,628 0 0
Henderson	1,512 15	1,617 17 6
Tigwell	1,499 10	1,594 4 0
W. W. Batten	1,454 10	1,577 10 0

For alterations to the Wellington Public-house, Goswell-road. Mr. G. Treacher, architect:—

Simpson	£1,041 0 0
Eaton	1,030 0 0
Beale	1,020 0 0
Cole	993 0 0
Andrews	970 0 0

For the erection of upper-class girls' schools, for the managers of St. George's School, Ramsgate:—
Duckett (accepted).

For alterations and additions to Conyngham House, Ramsgate, for Mr. C. H. Rose:—
Duckett (accepted).

For the erection of warehouses in Houndsditch, for Mr. T. A. Tibbits. Mr. H. Saxon Snell, architect. Quantities by Mr. Robert Griggs:—

Bamford	£4,950 0 0
Cooke & Co.	4,858 10 0
Wall, Brothers	4,813 0 0
Crockett	4,759 0 0
Mowlem & Co.	4,700 0 0
Brass	4,634 0 0
Nightingale (accepted)	4,253 0 0

For hot and cold water supply to the Holborn Union Infirmary, Upper Holloway. Mr. H. Saxon Snell, architect:—

Benham & Sons	£2,804 0 0
Potter & Sons	2,841 7 0
May, Bros. (accepted)	2,799 16 0

For gasfittings at the same building:—

May, Bros.	£1,200 0 0
Potter & Sons	1,050 0 0
Berry & Sons	956 0 0
Abercrombie & Sons	941 14 6
J. & W. Jeal	748 0 0

For forming stone piers, curb, and foundations for iron railing at St. Luke's Workhouse. Mr. H. Saxon Snell, architect:—

Pask	£375 0 0
Bamford	344 0 0
Robage	341 0 0
Howard (accepted)	274 0 0

For wrought-iron railing at the same building:—

Elliott	£240 0 0
Benham & Sons	220 0 0
Potter & Sons	211 6 0
Richardson & Elson (accepted)	188 10 0

For alterations and additions to Teddington House, Teddington, for Major-General Vialls. Mr. T. Goodchild, architect. Quantities supplied by Mr. H. P. Foster:—

Carless	£1,789 0 0
Adamson & Sons	1,700 0 0
Messum	1,633 0 0
Harris & Bonell	1,480 0 0
Hurst	1,464 0 0
Piller	1,454 0 0

For alterations and decorations to 13, Talbot-square, Paddington, for Mr. D. Macfarlane. Mr. John Heath, architect:—

Vears & Co. (accepted)	£410 0 0

For the erection of a villa residence in The Grove, Stratford, Essex, for Mr. J. Self. Mr. J. T. Newman, architect. Quantities supplied by Messrs. R. L. Curtis & Sons:—

Hoskings	£1,597 0 0
Cheffins	1,582 0 0
Mansfield	1,570 0 0
Norton	1,557 0 0
Reed	1,375 0 0

For road-making at the Crouch-hill Park Estate. Messrs. W. Waymouth & Son, surveyors:—

Williamson (accepted)	£850 0 0

For road-making at the Mercers' and Poynders' Estate, Upper Holloway. Messrs. W. Waymouth & Son, surveyors:—

Williamson (accepted)	£850 0 0

For the erection of two shops at Donegal-place, Clapton. Messrs. W. Waymouth & Son, architects:—

Niblett (accepted)	£1,210 0 0

For the erection of business premises, corner of Newgate street and King Edward-street, City, for Mr. John Mixer. Mr. James W. James, architect:—

Braid & Co.	£4,618 0 0

For rebuilding the Barley Mow, Curtain-road, Shoreditch, for Messrs. Mann, Crossman, & Paulin. Mr. Charles A. Legg, architect:—

Hunt	£1,075 0 0
F. & F. J. Wood	1,049 0 0
Hearle & Son	947 0 0
Walker	915 0 0
Atherton & Latta	915 0 0
Johnson (accepted)	868 0 0

For the erection of four houses in the Maybank-road, Woodford. Mr. S. Sanders, architect:—

List	£870 0 0

villa residence at Wimbledon. Mr. Clarke, archi- Quantities by Mr. Pollard:—

Cullum	£1,280 0 0
Ruby	1,190 0 0
Garrett	1,143 0 0
Fares	999 0 0
Kellaway	973 0 0
Nichols	944 0 0

For rebuilding 67, King's-road, Brighton. Mr. Arthur Loader, architect:—

Cheeseman & Co.	£500 0 0
Newnham	478 0 0
Bruton (accepted)	450 0 0

For additions to Primitive Methodist schools, Shoreham, Sussex. Mr. Arthur Loader, architect:—

Triggs	£562 10 0
Bruton	500 0 0
Blaker	498 0 0
Gates & Burfoot	440 0 0
Willett	420 0 0
Burchell	400 0 0
Curd	369 10 0

For a vicarage-house and outbuildings, Kirbymoorside, York. Messrs. Armfield & Bottomley, architects:—

Oldfield	£2,502 0 0
J. & P. Ward	2,097 0 0
Barlow	1,864 0 0
Kerr & Balton	1,855 0 0
Yeo	1,835 0 0
Burlow	1,750 0 0
Wood (accepted)	1,720 0 0

The accepted tender has since been increased to 1,936*l.* 18s. 3d., for boundary-walls, road-making, &c.

For the erection of the "Providence" schools, providing accommodation, on the 8-ft. and 9-ft. basis, for 633 children, for the Guisbro' School Board, the whole being one story in height. Mr. J. Mitchell Bottomley, architect:—

	Schools.	Three Dwelling-houses.
Wilson	£6,291 0 0	1,775 0 0
Dalton	6,055 8 9	1,937 0 0
Grange	6,367 0 0	1,503 0 0
Shaftoe & Barry	6,050 0 0	1,808 0 0
Lamb	6,102 18 0	1,730 12 0
Raper & Co.	5,840 0 0	1,660 0 0
Stephenson	5,744 0 11	1,614 9 2
Osborne	5,563 4 6	1,651 14 3
Kerr & Bolton	5,514 9 0	1,667 13 8
Nottingham	5,400 0 0	1,550 0 0
Johnson	5,320 0 0	1,602 0 0
Renshaw & Walker	5,410 0 0	1,483 15 0
Radge	5,354 0 0	1,442 0 0
Heckle, Bros.	5,394 0 0	1,310 0 0
France	5,090 0 0	1,585 0 0
White	5,201 0 0	1,446 0 0
Wilkinson	5,218 0 0	1,409 0 0
Boagey	5,271 0 0	1,343 0 0
Dickenson	5,100 0 0	1,507 0 0
Cass	5,200 0 0	1,382 7 0
Young & Cooper	4,989 10 0	1,476 4 6
Barton	4,977 0 0	1,400 0 0
Clark	5,300 0 0	970 0 0
Gladstone	4,977 5 3	1,380 10 0
Sturdy Bros. (accepted)	4,730 0 0	1,445 0 0
Haswell	4,667 0 0	1,280 0 0
Harrison & Son	4,750 0 0	1,150 0 0

For the Whole.

Hutchinson & Sedgwick	£6,725 0 0
Yeo	6,000 0 0
Cost of school buildings, including lavatories, galleries, cupboards, desks, and other fittings	£3,744 0 0
Tar paving to playgrounds	196 0 0
Boundary-walls and gates	560 0 0
Covered play-sheds, and conveniences fitted with Macfarlane's closet ranges	230 0 0
Cost per head of school buildings	4 10 0
Ditto, including boundary-walls, covered play-sheds, tar paving, and allfittings	5 13 6

TO CORRESPONDENTS.

W. M. P.—Messrs. G. & Co.—H. D. H.—H. S.—G. T.—A. L.—W. G.—Mr. L.—T. T. & Co.—E. P.—H. S. S.—W. J.—W. S.—J. D.—J. S.—E. C.| L.—K. & Co.—C. R.—J. R.—P. B.|C.—H. L. B.—C. A. L.—H. P. F.—R. J. P.—G. R.—E. K.—J. M. B.—S. S. (list should be sent, not single name).—D. R. D.—B. & S.—H. H. C.—Mr. W.

All statements of facts, lists of tenders, &c. must be accompanied by the name and address of the sender, not necessarily for publication.

NOTE.—The responsibility of signed articles, and papers read at public meetings, rests, of course, with the authors.

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RANDELL, SAUNDERS, & CO. (Limited), Quarrymen and Stone Merchants.
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Whitland Abbey Green Slates.—These slates are of a grey green tint, are stout, and made in all sizes. A large stock available for immediate delivery.—For further particulars, apply to MANAGER, Clynderwen, R.S.O., Carmarthenshire.—[ADVT.]

J. Sessions & Sons, Docks, Gloucester, Manufacturers of ENAMELLED and PLAIN SLATE CHIMNEY-PIECES, URINALS, &c. WELSH ROOFING SLATES direct from Quarries, to any station in the Kingdom. Prices and terms on application. [ADVT.]

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Patent Ventilator, or Air-Propeller, for the introduction of Cold or Warm air into Dwellings, &c.

The machine may be seen in action at their Show-rooms, 127, Regent-street, London, W.

The apparatus consists of a drum with a double set of fans, which are worked by a fly-wheel placed in the centre, and on the same axle as fans. The motive for this fly-wheel is arrived at by a small jet of water being directed on to it, causing both the wheel and fans to revolve with great velocity; the air passing through the machine at a rate equal to 2,500 feet per minute, if desired, according to size of apparatus.

N.B.—The above machine may be used either as an exhauster or injector, as may be preferred, or both objects combined.

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Designers and Manufacturers of Lamps and Candelabra.

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13, St. James's-square, London, S.W.
CITY BRANCH: MANSION HOUSE BUILDINGS, E.C.

FINANCIAL RESULTS.

The Annual Income exceeds	£279,000
The Assurance Fund is over	2,107,000
The New Policies in the last year were 544, assuring	303,115
The New Annual Premiums were	9,692
The Total Claims by Death paid amount to	3,736,794
The Subsisting Assurances and Bonuses amount to	6,356,262

DISTINCTIVE FEATURES.

Credit of half the first five Annual Premiums allowed on whole-term Policies on healthy Lives not over 60 years of age.
Endowment Assurances granted, without profits, payable at death or on attaining a specified age.
Invalid Lives assured at rates proportioned to the risk.
Claims paid thirty days after proof of death.

BONUS.

The Reversionary Bonus at the Quinquennial Division in January, 1877 (amounting to 357,014*l.*), averaged 50 per cent. and the Cash Bonus 30 per cent. on the Premiums paid in the 5 years.
THE NEXT DIVISION of PROFITS will take place in January, 1882, and Persons who Effect NEW POLICIES BEFORE THE END OF JUNE NEXT will be entitled at that Division to one year's additional share of Profits over later Entrants.

REPORT, 1877.

The 53rd Annual Report just issued, and the Balance Sheets for the year ending June 30, 1877, as rendered to the Board of Trade, can be obtained at either of the Society's Offices, or any of its Agents.

GEORGE CUTCLIFFE,
Actuary and Secretary.

THE MIDLAND LAND and INVESTMENT CORPORATION, LIMITED.
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CHIEF OFFICES—42, WATERLOO-STREET, BIRMINGHAM.
LONDON OFFICES—32, GREAT GEORGE-ST. WESTMINSTER, S.W.

Capital Authorised, 500,000*l.*; Capital Subscribed, 248,900*l.*; Capital Called up, 62,225*l.*; Capital Uncalled, 186,675*l.*
Reserve Fund, 100,000*l.*

DIRECTORS.
FRANCIS SEDDON BOLTON, Chairman.
HENRY ALLBUTT, SAMUEL BRIGGS, JAMES DEYKIN, JOHN HINKS, MAXIMILIAN LINDNER, HENRY ROLLASON.
JAMES H. IVORY, SECRETARY.

DEPOSITS received at Interest upon the following terms:—
At 28 days' notice, 4 per cent.
At 3 months' notice, 4½ per cent.
For Sums of not less than 100*l.* deposited for a fixed period of 12 months, 5 per cent.
Interest Warrants issued half-yearly—30th June and 31st December
Ample Security is afforded to Depositors by Assets and Investments in Freehold and Leasehold Estates, and by the large Uncalled Capital of the Corporation.
ESTATES and PROPERTIES Purchased.
FREEHOLD and LEASEHOLD GROUND-RENTS for SALE.
ADVANCES made upon APPROVED FREEHOLD or LEASEHOLD SECURITIES.
Full particulars may be received of, and deposits can be paid to, the London Agent of the Corporation, Mr. J. H. HILEY, 32, Great George-street, Westminster, S.W.

PROVIDE AGAINST ACCIDENTS by taking a POLICY of the RAILWAY PASSENGERS' ASSURANCE COMPANY, the Oldest and Largest Accidental Assurance Company. The Rt. Hon. LORD KINNAIRD, Chairman.
Subscribed Capital, 1,000,000*l.* Annual Income, 210,000*l.*
Bonus allowed to Insurers of five years' standing.
Accidents occur daily!! 1,230,000*l.* has been paid as compensation.
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